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On the NUMBER, NATURE, *and* DISTINCTIVE CHARACTERS *of the several* MATERIALS *which compose* CALCULI, BEZOARDS, *and different* ANIMAL CONCRETIONS; *by* A. F. FOURCROY.

[With coloured Engravings.]

IT has been within a few years only, that naturalists and chemists have acquired any accurate knowledge of the different concretions spontaneously generated in the bodies of animals. Before he had made known in the 7th year, the experiments which, in common with M. Vauquelin, he had undertaken many years before, on the nature of human calculi formed in the bladder, the world in general had but very imperfect notions of their composition. Anterior to Scheele, physicians looked on stones in the human bladder to be formed of absorbent earth, which some thought to be lime, and others of the nature of the earth of bones. Scheele shewed in 1776, that urinary human calculi were formed of a particular concrete acid, little, or rather nearly insoluble in water, or in the weaker acids, but very soluble in the fixed caustic alkalis, and which was known successively by the names of benzoardic and lithic acids, and lastly by the name of uric acid, which it now retains. In this discovery, too little prized in the scientific world, Scheele committed an error, the more extraordinary as they are but rarely met with in the works of this celebrated chemist; this was, in believing that the uric acid was the only constituent principle of human calculi. Bergman, who confirmed the discovery of Scheele, did not discover this error, but shortly after, many chemists ascertained the existence of another substance accompanying the uric acid, and which sometimes made up the greater part of their bulk; this substance is *phosphat* of lime, the basis of bones. Our extensive researches, says the author, on more than six hundred calculi of the bladder, on a considerable number

of bezoards, and on a variety of other concretions found in different parts of man and animals in general, have convinced us, that besides the *uric* acid, and the *phosphat* of lime, there may be found in these concretions, *urat of ammoniac,* urat of soda, a *magnesio-ammoniacal* phosphat, an *acid phosphat* of lime, and even sometimes of *silex,* and lastly a particular grease, which the author has named *adipocire,* and a resinous substance.

To these different constituent materials is to be added a gelatinous animal substance which accompanies all the salts enumerated above, and which, with the exception of the uric acid, adipocire, and resin, makes a necessary part of all concretions, serves to unite and glew their particles together. Thus then we have twelve different substances forming animal concretions instead of two, the number supposed to exist before our author's experiments; and as they may be found in different regions, and in different animals, he thinks that they should not be in future confounded under one or two improper denominations. Besides, he remarks, that each of them exists only in particular organs, and sometimes even in particular animals. A collection of these concretions is necessarily comprehended in every cabinet, yet notwithstanding the present advanced state of chemistry, there exists on this subject an uncertainty, nay, even a disorder, which should be no longer allowed. The author has therefore conceived it of advantage to observe, with respect to these bodies, what has been already introduced into other branches of this science, namely, to establish a classification and arrangement founded on their essential characters; in a word, to preserve that clearness and precision which at present so very eminently distinguish every branch of Zoology. Chemistry, by making us acquainted with the different materials which constitute the species and the varieties of these concretions, affords us at the same time characters in each of them sufficiently well marked and contrasted to furnish distinctive characters, and in future to prevent their being confounded one with the other. The author has already remarked, that his analysis had offered him twelve different substances in those animal concretions which he has as yet examined, and though he cannot assert that nature has limited herself to these twelve, still he thinks it highly probable that it approaches nearly to the true number, or if there should be found to exist another substance, he thinks it must be extremely rare: Since six hundred human calculi of the bladder, more than fifty biliary, taken

from

from man and other animals, twenty-five concretions taken from other parts of the animal body, and thirty varieties of bezoards, offered but the twelve substances already enumerated. In describing the physical and chemical properties which belong to each of them, the author gives, he thinks, a sufficiently exact knowledge of their ingredients as well as a sure mode of distinguishing them.

I. *Of the Uric Acid.*

Physical characters.—The uric acid, one of the substances most frequently found in human calculi, is disposed in dense layers, of a dusky yellow colour, the shades of which vary from that of straw to that of red marble, of rhubarb or bark. It is susceptible of a slight polish, and sometimes offers naturally this appearance. It is extremely brittle; chipping on the smallest fall or shock, it is easily reduced to powder of a pale yellow colour bordering on orange. It has neither taste nor smell. In the human kidney and bladder it is found of all sizes, from a grain of millet to that of a small melon. Its form is liable to great variety.

Chemical characters.—The uric acid turns black without melting on red cinders; it exhales a smell of burned bones, and gives carbonat and prussiat of ammoniac by distillation. It is almost insoluble in cold water; boiling water dissolves some thousand parts of its weight, but deposits almost the entire on cooling, in the form of small needle-like crystals, of a paler colour than before dissolution. It is not attacked by many of the weaker acids nor by many of the more powerful; the concentrated nitric acid dissolves it by the aid of heat, and converts it into prussic and oxalic acid, and becomes of a brilliant red colour; the super oxygenated muriatic acid changes it almost immediately into malic acid. The pure fixed alkalis, potash and soda, either liquid or concentrated, soften it into a kind of soap, and dissolve it with the assistance of a little water. All the acids, even the carbonic, precipitate it from these dissolutions in form of a fine white powder. Lime, barytes, and ammoniac do not produce the same effect, because they form with it insoluble salts; the lixivia of potash and soda are therefore the real and only solvents of calculi formed of uric acid. This acid has been as yet discovered only in the human urine, and is found to exist almost in every instance; it forms the small red crystals which are found deposited on the surface of chamber-pots; it is abundantly precipitated after febrile diseases, which physicians call critical. (Vide Plate, No. 1, a, b, c.)

 II. *Urat*

II. *Urat of Ammoniac.*

Physical characters. The urat of ammoniac, the existence of which, in urinary calculi, was unknown before our discoveries, and which is sometimes found to form entirely these substances, resembles frequently in appearance those formed of uric acid, and then the dusky colour layers, similar to coffee and milk, are fine and less marbly striated or fibrous than those made up of the pure acid. For the most part, this salt is of a greyish white or pearl colour, of a pretty dense texture, smooth and brilliant in some of its layers when it has been sawed, but generally porous and cellular. It has no sensible smell.

Chemical characters. On the first impression of heat applied with the blow-pipe, the urat of ammoniac gives ammoniac which is rapidly disengaged, after which it is similar in every respect to the uric acid. It is not sensibly soluble in water, but by an access of ammoniac it becomes so; all the acids, even the weakest, take from it its ammoniac and leaves its acid in a pure state. The fixed caustic alkalis immediately disengage its ammoniac, the smell of which characterises the urate of amm. (Vide No. 2, a, b.)

III. *Uriat of Soda.*

The combination of uric acid and soda was first announced by Mr. Tennant, as forming gouty concretions. We have twice met with this matter in our analyses; the following are its characters:

Physical characters. It is often under the form of irregular fragments glued together, without any arrangement of crystallization; its colour is white, without any polish, and it is made up of large grains, which lead one to think that it had been deposited rapidly. It is without smell, has a maukish taste, and has but little consistence. Though it is not absolutely friable, the coherence of its particles resembles that of vegetable matter, something like mushroom, or agaric, it is therefore compressible. When divided by a cutting instrument the surface shines, at least where the particles are most compact.

Chemical characters. The urat of soda, though not fusible in hot coal, or by the blow-pipe, still becomes quickly black and carbonifies. It exhales a thick fœtid smoke, as if from burned flesh. The carbon which results is of a deep black, and of but small volume. When it has been strongly calcined and washed in water, the water contains a carbonat and a prussiat of soda. It is not sensibly soluble

luble in water, but when boiled in it a long time it gives it a soapy appearance, a thick froth is thrown on the surface, which has a taste similar to boiled tendons or ligaments; in this way a gelatinous substance is extracted, and which seems to make a great part of this concretion; caustic alkali renders it soluble. The acids take from it its soda, and leaves the uric acid free. This combination has been found only in depositions of gouty matter in the articulations; and I have been able to procure but two of these during ten years that I have been occupied on this subject. (Vide No. 3.)

IV. *Phosphat of Lime.*

Physical characters. It is found in three different states in those concretions of which it forms the base; it is sometimes hard, bonelike, and granulated; of a greyish or yellow colour, and, like bone, susceptible of a true polish Such are the protruded stones of the pineal gland, of the lachrymal, salival, bronchial glands, &c. Sometimes it is formed of thin concentric layers, of an unpolished white colour, and easily separated as in urinary calculi; portions of human urinary calculi are of this nature. It has sometimes the compact hardness of ivory, giving out the same smell when sawed, and susceptible of very fine polish; it is found in this state in some ossifications of the soft parts, and in some variety of bezoards.

Chemical properties. The phosphat of lime has properties which distinguish it from every other kind of calculus; under the blow-pipe it becomes black, and exhales an animal odour; it at length becomes white and brittle; it is not attacked by the alkali; it is indissoluble in sulphuric acid, but very much so in the nitric and muriatic acids. These dissolutions are precipitated by the alkalis and even by ammonia, and the precipitate is always a phosphat of lime; they also give a calcareous oxalat, insoluble by the oxalat of ammonia or by the oxalic aciduli. Thus it is that we discover the presence of chalk. With respect to the phosphoric acid, we are assured of its existence by adding sulphuric acid; on decanting the liquid portion which swims on the top of the sulphat of lime on evaporating this liquor, it swells, becomes as thick as honey, melts into vitreous globules, and gives phosphorus with charcoal. These trials may even be made with the blowpipe. (Vide No. 4, a, b.)

V. *Acid Phosphat of Lime.*

Physical characters. In bezoards, which it principally composes, it is found in smooth layers, striated in its frac-

 tures,

tures, and but little adherent to each other. These layers are brittle and variable as to thickness, and remarkable for shades of green or grey colour. Its taste is rather sharp and acid; the smallest effort breaks it, and its fractures are remarkable for a brilliant, granulated, and crystalline appearance.

Chemical characters. It is fusible by the blow-pipe, gives out a slightly aromatic smell as it rises, forms vitreous globules, white and opake, and gives out a phosphoric light when perfectly red. It is soluble in cold water even more than in hot, in which it separates in the form of small, brilliant spangles as it cools. It is affected by the acids in the same way as the phosphat of lime, and the alkalis change it immediately into this salt by taking from it a portion of its superabundant acid. Cit. Fourcroy has as yet found it only in the bezoards of some of the mammali. (Vide No. 5.)

VI. *Ammoniaco-Magnesian Phosphat.*

Physical characters. This substance is easiest known and best characterised; yet, notwithstanding these descriptive marks, its existence was unknown. It is generally found under two forms, sometimes in real crystals of a prismatic shape and semitransparent whitish colour; sometimes it is found flattened with rising edges, and running over the surface of animal concretions, as may be seen in some human calculi in the bezoards found in the intestines of horses, of the elephant, &c. Sometimes it is found in spathic layers, semitransparent, of different thickness, and covering the primitive nucleus of uric acid or some other matter; these layers imitate so closely calcareous spath, that Daubenton and Vicq. d'Ayzr, who first described them, have universally confounded them with this fossil. The ammonaico-magnesian phosphat is easily reduced to the state of a white powder, light, and resembling magnesia or flour, having a mawkishly sweet taste, but without that dryness which characterises phosphat of lime.

Chemical Characters. These are no less remarkable than its physical. It is blackened by the action of the blow-pipe on charcoal, and exhales a slight animal smell, which afterwards is changed to an ammoniacal. It is melted by a considerable heat; it is soluble in hot water, and crystallizes on cooling. Fixed alkalis disengage the ammonia, and separate the magnesia and form alkaline phosphats easily crystallizable. Acids dissolve it readily,

without

without any effervescence. When kept in pretty large pieces in weak muriatic acid, it is found after some hours like membranous flocculi, light and transparent, more abundant, and approaching nearer to the primitive form of the calculous fragments than is observed to be the case with phosphat of lime, which presents the same character but to a much less degree. It is often found to form the exterior layer of human urinary calculi. It constitutes the greater part of those bezoards found in the intestines of the horse, elephant, and larger mammiferous animals. It is never perceived in the bezoards found in the bladder of the same animals. As well as in human urinary calculi, its existence has been proved in the human urine, first as a phosphat of magnesia, and afterwards combined with ammoniac, and which is formed when the urine begins to change sufficiently to produce ammoniac. This triple salt is precipitated in the form of hexaedral prisms on the surface of glass vessels in which it had been kept, and under the pellicle which this fluid often forms on its surface. (Vide No. 6, a, b.)

VII. *Oxalat of Lime.*

Physical characters. We should hardly expect to find this substance among the constituent principles of animal concretions; and the author tells us, that it has often escaped his analysis. On one occasion, however, he ascertained its physical properties sufficiently; and he has constantly found it in that species of human calculus called by Surgeons the mulberry stone, so termed from its colour and exterior appearance. This salt, in the animal body, is of a dusky brown colour, exteriorly unequal in its surface, and beset with tubercles, which are sometimes pointed and sharp. Interiorly it is extremely hard and difficult to cut, and gives out by the friction of the saw, a mawkish animal smell, presenting a finely polished surface of a pearl colour, and formed by concentric layers.

Chemical characters. The oxalat of lime, heated with the blow-pipe, gives a smell resembling burned leather; it turns black, and gives out much smoke; it is easily converted into cinder, and leaves a white residuum soluble in water, and shewing all the characters of quick lime. It was this circumstance which manifested the existence of a calcareous salt, the acid of which was dissipated by heat, that first led the author to its discovery. It is soluble in water, which takes from it however, on boiling, a quantity of gelatinous matter. The weaker acids do not affect it.

it. Nitric acid, rather strong, dissolves it. Alkalis do not act on it; but carbonats of pot-ash or soda decompose it in the moist way; and this is the only process by which the author was enabled to demonstrate at once the existence of oxalic acid and lime. In this case there is formed a carbonat of lime which remains at the bottom of the liquor, and an alkaline oxalat which is dissolved. This compound has been as yet found only in the human urinary calculus. (Vide No. 7, a, b, c.)

VIII. *Carbonat of Lime.*

Physical characters. This substance, so long known in medical books to be the only basis of those concretions found in man and other animals, has not been as yet perceived in a crystalline form, nor in that compact lamellated state in which other concretions are found. Its form is extremely irregular, sometimes however it is met with oval or rounded, or made up of an aggregation of particles tied together by animal gluten. It is for the most part white or grey, but sometimes of a dusky yellow colour.

Chemical properties. Two characters distinguish it from every other animal concretion. It gives quick lime after complete calcination, and effervesces with nitric and muriatic acids, in which it is readily dissolved. The animal matter which is more or less abundant is dissolved in boiling water and destroys its consistence. It becomes brittle when submitted to fire in Papin's digestor, like calcareous phosphats and oxalats. This substance has never been found in the concretions of the human body. It is in the bladder and kidneys of mammiferous animals that it is met with, especially in the horse, ox, and hog. (Vide No. 8.)

IX. *Silex.*

Silex is the more rarely found of any of the substances enumerated in the composition of animal concretions. The author found it only in two of the six hundred of which he gives the result of his analysis. In these, the silex was found mixed with four other different materials, and which was only detected in the residuum after the process was finished. Its insolubility and hardness, and the manner it acted on metal blades, left no room to doubt of its presence, and will serve in future to characterize it. It is so seldom met with in concretions, and is so small in quantity, that it should be regarded as the effect of chance. The author has given no engraving of the calculi in which he found it.

X. *Adipocire.*

X. *Adipocire.*

The author has, for many years, applied this term to a particular oily concrete found in different animal compounds, and the nature of which is between grease and wax. It is analogous to spermaceti, although it differs from this too by being less dry and more fusible; but the analogy induced the author to comprehend this last under the generic name of Adipocire. All the soft parts of animals have a singular tendency to run into this state by the putrefactive process; but the author having found it in many other cases of animal combination, and as he also found it to possess qualities according to the different circumstances of its formation, and the place it occupied, he speaks here only of that state in which it is found in the gall bladder of the human subject.

Physical characters. It is often found composed of brilliant lamulæ, white and pure, or else, as in the concretion already cited, covered with a brown coloured matter. Sometimes it is found in small striæ traversing these concretions; it is soft and greasy when pressed between the fingers; when rubbed or heated it has a maukish smell, approaching much to that of tallow or spermaceti; it is very light, and floats on water.

Chemical characters. Like spermaceti, it is melted by the same degree of heat. When melted it appears like a yellow oil; like wax, it is reduced to vapour, and sublimates above the temperature necessary to melt it. It yields water, sebacic and acetous acids, also hydrogenous carbonated gas by distillation. Its fusibility is such as renders it less capable of decomposition by an open fire than grease. It is but little affected by acids; it unites readily with alkalis, with which it forms a soap; it is insoluble in water, and soluble in alcohol, more when heated than when cold, so that it is separated from it on cooling in the form of brilliant crystals. Water precipitates from its dissolution in alcohol, and in this property resembles camphor; it dissolves in the fixed oils, and even in the volatile oils, by the addition of heat. It has been, as yet, found only in the human gall bladder. It is sometimes pure and isolated in those that are white. It is not found in the biliary concretions of the ox, nor in those of any other animal with which the author is acquainted. (Vide No. 9, a, b, c.)

XI. *Animal*

XI. *Animal Bezoardic Resin.*

History. There exist animal concretions, either in the whole or in part resinous, which have been as yet but imperfectly made known, and then even on the report of their possessing virtues almost miraculous. The excellence of bezoardic medicines has been extolled not a century back. Such were the concretions, probably intestinal and biliary, formerly found in the Materia Medica, under the title of Eastern Bezoards. We must take care not to confound them with the hard eastern bezoards, and apparently earthy, formed of carbonat of lime, an acid phosphat of lime, or an ammoniaco-magnesian phosphat.

Physical characters. Its extreme surface is smooth and polished as marble; of a deep green, sometimes a brown colour, sometimes veined like marble, and frequently exhales, when rubbed, a sharp aromatic smell. It is easily broken, and separates into brittle laminas of a more or less darker colour than the outer layer. These layers, which are concentric, are generally of equal thickness down to the centre or nucleus, which is frequently found to be a cherry-stone, and which proves it to have been intestinal.

Chemical characters. Although its analysis has not been pushed very far, yet we know enough to distinguish animal resins from the preceding substances. The matter of bezoards softens and melts by heat. A heated needle passes through it readily. It gives out a strong aromatic musk-like smell; inflames and burns with a thick smoke. Although not soluble in boiling water, it gives to it a colour. Alcohol dissolves it entirely, and becomes coloured; this is precipitated by the addition of water in the form of a paint. Caustic alkalis dissolve it; in this it differs from vegetable resins. We can perceive therefore why the eastern bezoards were formerly imitated and made, by melting and mixing together a variety of resins, and of gum resins, to which amber and musk were added as well as gold leaf. The Goa stone of the Materia Medica is a factitious bezoard of this kind. There is also a resinous matter, less fine and less compact than the foregoing, in some human biliary concretions, and which is sometimes found in the gall bladder of the ox; this last is used in painting. In the elephant that died lately in the menagerie in Paris, and which was dissected by C. Cuvier, a stone of this kind was found and sent to the author.

XII. *Gelatine.*

The author makes this the last and twelfth substance of animal concretions, which, for the most part, accompanies these bodies in their formation, particularly the earthy phosphats, the carbonat of lime, the oxalat of lime, and uriat of soda. This animal matter, which seems to resemble gelatine, is never found alone, and, in fact, cannot alone form calculous concretions, since it never takes on that solid concrete state which characterises these bodies. It gives however to the other substances the consistence, the bond of union or cohesion, which distinguishes them; in short, it glues their particles together. It should therefore be counted among the constituent parts of calculous concretions, and its presence is always marked by the fetid smell which it gives out on burning; by its being changed into coal by fire; by the animal smell which it imparts to water in which it has been boiled, and by its being precipitated by tannin. Its presence the author conceives to be an incontrovertible proof of the animal origin of concretions, and consequently forms one of the most certain characters of this kind of natural productions. The author thinks that this animal gluten of calculi varies in its nature, or is not always the same in different kinds of concretions.

A Case *of* Amputation *of the* Thigh, *in which the Femoral Artery was successfully compressed at the Groin; by* G. Borrett, *Surgeon, Great Yarmouth.*

In Vol. V. No. xxii. of your useful Journal, I was favoured by your attention to a Paper on Strangulated Crural Hernia, which induces me now to beg the same indulgence, in your next Number, on the subject of Amputation.

February 7, Robert Grint, a strong healthy lad, fifteen years of age, while standing about a yard from the muzzle of a loaded gun, received its contents into his left thigh, at the place where the tourniquet is usually applied in amputation, which so dreadfully shattered the limb, that there appeared no prospect of saving it. I immediately called a consultation with my surgical friends, when amputation was considered the most judicious step to be taken; but as this operation involved difficulties new to us,

us, much apprehension was entertained for its success. From the situation of the fracture and extent of the injury, no tourniquet could be applied with effect, and, but for the opinion delivered by Mr. Astley Cooper, when I attended his lectures in the year 1795, "*that any bleeding in the thigh and leg was under our command by pressure upon the femoral artery at the groin,*" the operation in this case might have been relinquished, or if performed, unsuccessful; for every man is not prepared to dash down upon a large artery and meet a torrent of blood, which, if not stemmed in a few seconds, destroys the patient.

At eight o'clock in the evening, (four hours after the accident,) every thing was ready for the operation, when the compression of the artery at the groin was assigned to Mr. Downes. The amputation was performed in the usual manner and much to our satisfaction, seeing that the compresion of the artery was judicious and effectual. The artery was tied by means of the tenaculum with a small ligature as usual after amputation. The limb was removed high up, leaving not more than three inches of bone below the trochanter major.

On the second evening after the operation, not a speck of blood was seen through the dressings; but early on the following morning I was called to my patient, in consequence of a sudden shew of blood the breadth of the whole face of the stump. The person who watched, instantly compressed the artery over the ramus pubis, in the manner he had been instructed, in case of such an appearance. Apprehending that there was no security for my patient any longer than the pressure could be steadily continued, I sent for my surgical friends, determined to lay bare the artery, and tie it an inch below the os pubis, which was easily accomplished. On the eleventh day from the application of this second ligature it came away; no hæmorrhage ensued in consequence of its separation, and all appeared well except a sphacelus, an inch in breadth, of the skin and cellular substance, on the edge of the fore part of the stump, which I imagined had come on in consequence of the artery being tied at the groin, and by that means the direct supply of blood to the skin on the fore part of the stump cut off.

After the limb was removed, it was examined; five splinters of bone (from one inch and a half to two inches long, and half an inch thick) were found; the femoral artery being lacerated and the muscles much torn.

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In the second operation we had the most satisfactory demonstration that the artery may be effectually compressed at the groin; for, in exposing the vessel, I unluckily divided a cuticular branch, about the eighth of an inch from the main trunk, and the pressure at the groin being removed, the blood jutted out per saltum, but was immediately stopped by the pressure at the groin.

In No. xli. Vol. viii. of your Journal, Mr. A. Cooper, gives a paper on Aneurism, and in a short note observes, "Mr. Lucas amputated a thigh so near the groin no tourniquet could be applied, and the patient was secured from bleeding during the operation by pressure upon the artery at the groin." I have been induced to offer this case for publication to corroborate the above practical fact. If pressure at the groin may be relied upon in amputation, may it not also in the operation for femoral aneurism? Mr. John Bell, in his book on Surgery, vol. i. p. 414, under the head "of the difficulty of compressing the great arteries at the axilla or groin," observes, "in performing our operations on the great arteries of the arm-pit or groin, we must trust nothing to assistants, nothing to compression of the artery; we must do our operation with peculiar boldness and skill, otherwise we shall hardly save our patient, for in a single moment he is either safe or dead, &c."

This conclusion Mr. Bell has supported by some striking and well authenticated cases, which I do not mean to doubt or deny. They carry conviction to every mind as to the existing circumstances, but do not prove incontestibly, that, compression of the artery at the groin is unsafe; or that it is injudicious to avail ourselves of the practical fact which these two cases substantiate. I trust that they will have their use, by strongly impressing the minds of surgical gentleman on this important point in their profession.

I take this opportunity of expressing my sense of Mr. Edward Kentish's invaluable Essay on Burns; since the public was favoured with his Treatise, I have had several cases of scalds and burns, the easy and rapid healing of which have exceeded my expectations.

May 9, 1803.

COPY

Copy *of a* Letter *on* Typhus Fevers, *by* James Lind, M.D. F.R.S. *Physician at Windsor, and Fellow of the Royal College of Physicians, at Edinburgh, to* Thomas Pennant, *Esq. of Downing.*

SIR,

THE excellent account of the diseases of the Indies, which you alluded to, is the work of the late Dr. James Lind of Haslar; but although I am not the author of that valuable book, yet I shall venture to transmit to you, a short account of what I collected on the subject *of plague in the East Indies,* during my voyages to those parts of the world.

Some physicians, with no small degree of probability, consider *jail fever* (which disease I have seen, in all its various states, in the outward bound East India fleets, during their passage from England to India) to be the same disease as the true plague that visits Turkey, Egypt, *and formerly Europe:* * This much is certain, that they agree in being communicated by contact, and being taken in by the lymphatics, occasioning buboes in the glands, into which they carry and deposit the infection. In the cases in which I have seen buboes in jail fever, they were in the axilla; whereas in Turkey they generally are in the groin,† and this I imagine, proceeds from the contagion being taken in by the lymphatics of the legs, owing to their sitting bare-legged on infected sophas. If the infection is taken by the lungs, it must be in a way that may be reckoned the same as actual contact; *viz.* by breathing the effluvia of goods *highly tainted,*‡ or the fumes of putrid fæces from a person in the last stage of the disease; or by taking in their breath at this time; in which cases the infection is sometimes rapidly communicated to the blood,

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* Sir John Pringle says, in his Annotations, Vol. viii. p. 72, which he bequeathed to the Royal College of Physicians in Edinburgh: That in August, 1770, conversing with Dr. Mackenzie, who lived eight years at Smyrna, and the last thirty at Constantinople, "I find that the common endemic pestilential fever of Constantinople, is the same as our jail or hospital fever, and they call the same distemper, when raised to a greater height, the plague; that is, when the ordinary symptoms were joined with buboes and carbuncles."

The above quotation is taken from Dr. Gardiner's Observations on the Animal Economy, p. 187.

† Cruikshank's Anatomy of the Absorbing Vessels, p. 123.

‡ Gardiner's Observations on the Animal Economy, p. 213.

blood, and the increased action of the heart and fever speedily begins.* But when it is taken by the lymphatics of the extremities, it generally requires twelve or thirteen days to reach the heart, and to begin the fever, the poison being so long retarded in passing through the lymphatics and glands of the axilla or groin.

I am confident that neither plague nor jail fever, any more than small-pox or measles, can be produced by any other means than by infection received from some person, or thing, that is tainted with their specific contagion.

In the most aggravated state that I ever saw the jail fever, in which two patients had life suspended in the first attack of the disorder, several had buboes and carbuncles,† and every symptom of true plague; yet, *by exposing those thus afflicted with it to the open air, their fevers were removed in a few days, and very few died.*

Of the many hundreds that are landed at times from the fleets from Europe, at Madrass, ill with jail fever, seldom any remains of it are to be seen, after a week or two at most, from the sick being all laid in the air, under open sheds.

It is also well known that the plague will not propagate in India, although it is said to be sometimes brought to Surat, in the cotton ships from the Red Sea, and Gulph of Persia; and although it infects a few of the people employed in unloading and repacking the bales of cotton, yet it never spreads; *owing to the inhabitants all living in a constant stream of air.*

From this cause it probably is, that the plague has never been known to rage in Hindostan; and the only fevers which induce great mortality in that part of the world, are all from marsh miasma, the *bilious putrid remitting fever.* The dysentery, undoubtedly, proceeds from the same miasma, as may hepatitis, when aided by some as yet unknown endemic contagion; the *true hepatitis* being only to be found in particular marshy situations in that country.

Among other causes which may exempt the inhabitants of Hindostan from pestilential fevers, are their daily ablutions in their sacred tanks and rivers; their anointing with oil;

* Gardiner's Observations on the Animal Economy, p. 241. Lind on fevers and infection, p. 83.

† The species of carbuncle here mentioned, if it may be termed a carbuncle, was hemispherical, of the size and purple-colour of an Orlean plumb, the skin very thin, and often times flaxid, and the contained liquid, a thin bloody sanious.

oil; their being altogether without cloathing, or using only those of muslin, which are washed every day. Their abstaining from animal food; their constant use of spices and fruits, and not having their floors covered with carpets, or using furs or woollen cloths, which contain contagion; a cane mat being the usual bed of an Hindoo; indeed, some few have a matt of straw, or a bit of carpet under it, and these are commonly laid in the open air.

Again, in Egypt and Turkey, where the plague is endemic, their houses are close, their chambers stifling, their floors entirely covered with carpets, and low sophas all round the rooms. Their pellices, and woollen garments, which retain and foster contagion; and the belief in predestination, which keeps them from avoiding infection, render them the promoters and victims of this deadly disorder.

While the Europeans, whose houses are commodious, well aired, and kept clean, use linen and wine in moderation, and avoid contagion as much as they possibly can, such people are but little liable to pestilential fevers. But Europe is never entirely free from pestilential contagion, it being more or less kept up in our jails, hospitals, and dirty habitations, situated in the lanes and narrow streets of cities, and crowded manufacturing towns; and from them communicated to our fleets and armies, and again by them, particularly the soldiers, disseminated over every part of the kingdom, so as to become seriously worthy of public notice.

The only possible means of diminishing this growing contagion, seems to me to be, the establishing pest-houses, or houses of recovery from pestilential fevers, in every town; and also military hospitals, for *Typhus only*, wherever there are barracks, or numbers of troops quartered, and all of them furnished with smoke and wash-houses, for the purpose of purifying the clothes of the infected, with proper hospital dresses for the patients, on the plan of those of Haslar Hospital. The impropriety of admitting typhus patients into hospitals and infirmaries, where there are convalescents from other disorders, from the *certainty* with which typhus contagion seizes them, is too well known to every medical practitioner to need being mentioned here.

To

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AGREEABLY to the request mentioned in your Journal, I have presented you with a concise account of the Epidemic Catarrhal Fever, as it has appeared in an extensive eastern part of the county of Somerset. The appearance of the Influenza in England was very sudden, and its attack extremely general, so that it is difficult to say, in what, or in how many parts of the kingdom it prevailed at first. It must naturally attract attention, first in the metropolis, and other cities, from their corresponding population and greater number of the sick; this circumstance seems to have given rise to a precipitate conclusion that these were the places first attacked, and that from these it was diffused progressively throughout all others. Whereas, it is more probable that the disease broke out in all the places, at or nearly the same time. The literary history of the Influenza, given by different writers, shews it to be more sudden in its attack, more rapid in its progress, and more universally diffused, than any other epidemic with which we are acquainted, whether contagious or not. Dr. Glass says, when it prevailed at Exeter in the year 1729, it was conjectured that two thousand persons at least were seized with it in one night; and that in the year 1557, according to Mercatus, it attacked all parts of Spain at once, so that the greatest part of the people in that kingdom were seized with it almost on the same day. It is thought by some that the Influenza spreads more generally in towns and cities, than in villages; but I think otherwise, if proper allowance were made for the greater population in the former than in the latter. There has always been a necessary distinction between epidemic diseases that are not contagious, and those that are both epidemic and contagious. Of the first kind we consider Intermittent Fevers, which may be very general, but not contagious; and from the considerations hereafter mentioned, I am inclined to believe the same of the Influenza.

This disease, so frequent in its recurrence, so general in its seizure, and often so violent and dangerous in its consequences, naturally engages the attention of the public, as wells as physicians, and prompts them to investigate its nature and causes. The question agitated for determination, is, whether the Influenza is, or is not contagious? A question

question certainly of great consequence, since if it were proved in the affirmative, it might lead to the discovery of prophylactic or preventive means. When I consider the sudden manner in which the Influenza makes its appearance, the great and wonderful rapidity with which it spreads; that it attacks whole counties, nay even whole kingdoms, almost in the same day; that it affords no certain traces of progressive communication from one person to another; and that, in these circumstances, it is peculiar to itself, and different in all respects from other infectious diseases, I am of opinion that it is not contagious; at least, not primarily so; but that it owes its source to the state of the atmosphere. Dr. Darwin observes, "that this malady attacks so many at the same time, and spreads gradually over so great an extent of country, that there can be no doubt but that it is disseminated by the atmosphere. In the year 1782, the sun was for many weeks obscured by a dry fog, and appeared red as through a common mist; the material which thus rendered the air muddy, probably caused the Epidemic Catarrh which prevailed in that year, and which began far in the north, and *extended itself over all Europe.*" Zoonomia, c. ii. 1. 3.

We come now to a more satisfactory subject, a description of the phenomena of the disease in its commencement, progress, and termination, with the medical treatment. The first case of Influenza to which I was called, occurred about three weeks since; from which time the disease has continued to spread, and prevails generally even at this period. Though there are some leading characteristic symptoms in the Influenza, there are others extremely different in different patients, and in all gradations from mildness to severity. A severe case of simple Catarrh presents an imperfect model of a mild one of the Influenza; chilliness, with rigors, sometimes pretty severe, with head-ach, pain in the loins, back and limbs, vertigo, nausea and sometimes vomiting, great and sudden languor, with anxiety, depression of spirits, and debility.—The cold stage is various in duration, and sometimes it does not happen at all, or in so slight a manner as to escape the observation of the sick; the other attendants of fever soon follow, denoted by heat and dryness of the skin, some but little thirst, a brownish fur in the middle of the tongue, but moist at the edges; an early and total loss of distinction of taste, with inappetency, sneezing, a thin acrid defluxion from the nose, with a stuffing in the same, impeding the admission of air; a watery discharge from

from the eyes, which are often much inflamed, preternaturally irritable, and extremely painful on exposure to light; a frequent tickling cough, at first dry, and particularly violent on first lying down; it is often as violent and convulsive as in hooping cough, and frequently occasions vomiting and epistaxis. This cough, from being at first dry, becomes gradually moist, and followed by an expectoration, more or less copious, of viscid phlegm and mucous, which is of a whitish or yellowish colour. When the expectoration is copious, and brought up freely, the patient may be considered out of danger, except he be under the existence of phthisis, or any other violent and dangerous disease. The pulse is generally about 80, and I have not known it exceed 100; it is commonly soft and full at the beginning, but in the course of a few days becomes weak. A severe inflammatory affection of the chest sometimes happens, marked by the violence of the cough, dyspnœa, oppression, and pyrexia, and by transient stitches in various parts, and sometimes by a fixed pain in the side. In several patients, of robust and plethoric habits, I have seen all the diagnostic symptoms of pneumonia present, except a direct pain in the thorax.

A sudden prostration of strength, anxiety and despondency take place I believe, in some degree, in every instance of Influenza; and those symptoms mark and characterize it from all other diseases. In several slight cases no other symptoms than those attending a mild catarrh were present, except great debility and lassitude; while, in some instances, the phlogistic diathesis and sanguine congestion in the lungs have passed on to pneumonia; in others, indirect debility has quickly followed, and the disease has assumed the appearance of, and actually terminated in, typhus or low fever, of an uncertain duration and event. When the Influenza was epidemic in 1782, many people labouring under it, often dropped down suddenly on going to work. Many cases have occurred with, and many without, any inflammation of the internal fauces; but most patients have complained of a dryness in the mouth and throat, and soreness in the wind-pipe and œsophagus. With us, the duration of the disease has been from three or four days, in slight cases, to a fortnight or three weeks in severe ones. After the febrile symptoms disappeared, the cough has frequently continued with great severity, and a copious mucous expectoration for some time after, accompanied also with want of appetite, and great languor and debility. I have hardly seen a case but

with more or less of cough. When the febrile symptoms have been considerable, the urine has been high coloured, with a lateritious sediment; but in slight cases it has undergone very little change. A diarrhœa, in many cases, either happened spontaneously in the first days, or was easily excited by gentle opening medicines; the nights are generally restless, with little sleep.

As to the treatment of this disease, I have found slight cases, resembling simple catarrh, yield speedily to confinement to the house, lying some hours longer in bed, and the liberal use of diluting, cooling liquids, mild diaphoretics, and gentle and repeated purgatives. In severe attacks, and especially in athletic young men used to full diet and robust exercise, and with symptoms of inflammation or congestion in the head or lungs, a different treatment becomes necessary. Here, a total confinement to bed, with the exception only of sitting up for a few hours at a time, an early and moderate venæsection, a blister to the chest, saline opening medicines, or an emetic, followed by demulcents and gentle diaphoretics, have commonly produced the wished-for effect. The most material points to be determined in the cure of Influenza, are the propriety of venæsection and the use of antimonials. In all acute diseases, and particularly in this, so various, fluctuating, and uncertain in its symptoms, progress, and termination, it is difficult to ascertain the decided efficacy of any remedy, more especially from the practice of any individual: It is by uniting our own observations and experience to that of many others, and by a judicious and careful comparison of the whole, that we can be enabled to lay down any general rules for practice in any disease; and even after all our labours and united exertions, numerous exceptions will present themselves.

I shall now speak of what has and what has not succeeded with me. In all cases where there is not a combination of acute pain in the chest, great dyspnœa, a dry, frequent, and violent cough, a full if not a hard pulse, thirst, considerable heat of skin, and high coloured urine, in fact, the presence of direct symptoms of peripneumony, I conceive the use of the lancet either superfluous, inadmissible, or certainly injurious; and I have seen cases that have demonstrated the one or the other. On the other hand, under the existence of the above symptoms, I have witnessed great, speedy, and decisive benefit from bleeding, repeated even twice or thrice. The state of the blood too, has confirmed the propriety of the operation; for, in every

every instance, it exhibited a firm buffy coat, with a cup-like appearance. Antimonials, even in small doses, have not generally succeeded; they have operated too powerfully on the stomach and bowels, in occasioning vomiting or diarrhœa, and frequently both. In some cases, perhaps, this effect arose from the omission of an emetic in the beginning, which I think is often beneficial, and puts the disease in a more favourable state. The saline mixture made with ammonia preparata, or the aq. ammon. acetat. have for the most part answered as diaphoretics. After the first days of the disease, and when the febrile symptoms are abated, the occasional use of anodynes has afforded great relief to the cough and restlessness, without increasing the heat of skin or dyspnœa, or accelerating the pulse. At the same period, in case of great debility, languor, and loss of appetite, much benefit has been derived from gentle not heating tonics; such as, inf. gentian. comp. vel quass. c. vel absque acid. vit. dilut. Though an abstinence from solid meat has been both desired and recommended, yet light preparations from it, in the way of broths and jellies, have been grateful and refreshing, and by a gentle, uniform stimulus, have supported the strength and spirits of the patient under an oppressive disease. I have constantly found wine inadmissible before the subduction of the inflammatory symptoms.

I am, &c.

Ansford,
April 18, 1803.

JAMES WOODFORDE, M.D.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

A WISH having been expressed in a late Number of the Medical Journal, to know the most prevailing epidemics in the country, I take the first opportunity of sending you the following account of such as have prevailed most generally, in a district of several miles in this part of Suffolk; which, if you think deserving a place in your valuable Miscellany, is at your service.

The most prevailing epidemics for the last twelve months have been typhus maligna and mitior, scarlatina anginosa, measles, and mumps. Many of the former have proved alarmingly fatal in several of our villages, whilst

 those

those of the second class of typhoid fevers have put on the appearance of the low nervous kind, attended with great prostration of strength, depression of spirits, loss of appetite, &c. which frequently continue many weeks before a compleat recovery ensues. The most general method of treating these fevers has been by first giving a vitriolic emetic; a small dose of calomel and rhubarb, just sufficient to open the bowels if constipated, after which the cinchona c. serpentaria, aromatics, and red port have been exhibited; but which have generally, in strongly marked cases, not proved sufficiently powerful, without the friendly assistance of the muriatic acid internally, in large quantities, which has succeeded in many desperate cases, beyond all expectation, assisted by the external application of acetum and aqua, keeping the patient constantly wetted therewith by means of a flannel waistcoat and long worsted stockings, applying it either cold or in a tepid state, according to the heat and circumstances attending the patient, invariably premising a frequent change of linen and bedding, ventilating the rooms, and fumigating with vitriolic acid and common salt.

Five cases of the most malignant kind of typhus occurred in a farmer's family I lately attended; the first, in a fine young man of 18, who died after lying several days delirious; mouth, tongue and fauces black; teeth furred, and throat sore. He was treated in the old method, with cortex, cordials, aromatics, and plenty of wine, but without the assistance of acids either internally or externally. About a week after his death, his father, 64 years of age, two grown up sisters, and a brother, fell ill of the same fever; their symptoms, delirium, sore throats, quick, feeble pulse, total loss of appetite and strength, subsultus, black tongues, and full stomachs. They were vomited with zinc. vit. and ipecac.; ordered Port wine, cortex, and aromatics; their rooms ventilated and fumigated; under which treatment they hourly grew from bad to worse; could take very little, and some of them no nourishment, and were given up as lost, particularly the old gentleman, who laid almost perpetually hiccuping in the most violent manner. At this time we commenced our new plan (first suggested to us in your excellent Miscellany) of giving the muriatic acid boldly, which we did by dropping 80 drops of that acid with 20 of elix. vit. and 20 of tinct. opii into a quart of water, to which was added lemon peel and a sufficient quantity of sugar to make it perfectly grateful and pleasant; of this they drank ad libitum. We likewise prepared

prepared another quart, half wine, acidulated as above, of which they also took at pleasure; and for some days little else was taken, as almost every thing but the above disagreed with their stomachs, which were repeatedly so sick and loaded, as to render gentle emetics indispensible.

Two of our patients, for some days, were kept alive by cordial injections per anum, composed of decoct. cinchona, strong broth, wine, and tinct. opii. The old gentleman's hiccup was successfully treated by blistering the diaphragm, and giving two grains of opium, with musk, camphor, and æther at a dose, and repeated as occasion required. All our patients were kept moist with vinegar and warm water, applied from a tea-pot on their flannel waistcoats and long stockings; by the united efforts of which, we had the unexpected pleasure to see them all survive, and by slow degrees recover their former health. One of the nurses out of four, caught the fever and died. Four in a neighbouring family likewise caught it by visiting our patients, two of whom were lost, who being attended by another medical gentleman, had not the acid plan directed. Our four patients took, in about ten days, a pint of muriatic acid and two ounces of elix. of vitriol, making some allowance for the part the nurses might occasionally partake of.

The Scarlet Fever, with and sometimes without the sore throat, has been very rife for several months in a large district around this neighbourhood, and in many parishes has proved very malignant and fatal; some instances having occurred where healthy strong subjects have died in the course of forty-eight hours from the first attack. It is now but little heard of, and 'tis hoped its baneful effects have nearly ceased. The most successful general plan of treating Scarlatina Anginosa has been, to clear the stomach at its commencement with zinc. vit. and ipec.; blistering the throat when sore, gargling with myrrh, infus. cinchonæ and acid, restraining the diarrhœa when profuse by injections of red port, infus. cortex, and t. opii; but above all, by keeping the skin constantly wetted with vinegar and warm water, ventilating and fumigating with vitriolic acid, salt or nitre, changing the bed and clothes when necessary, giving the cortex, serpentaria, and muriatic acid, and allowing a vinous and generous regimen. We have in many forlorn cases of Scarlatina Maligna, as well as Typhus, recovered patients by the free use of acids internally and externally, that were given up as lost, and apparently would have been so, but for their powerful assistance;

sistance; where they are given largely, a proper quantity of tinct. opii should be subjoined, to prevent their nipping the stomach and bowels.

Several very strong cases of our success in Scarlatina, by the above plan, I could send you, particularly one of a lying-in delicate woman, seized with Scarlatina Anginosa the second day after delivery, with every fatal symptom attending, who was snatched from the jaws of death by the acid plan above described.

I am, &c.

W. GOODWIN.

Earlsoham, Framlingham, Suffolk, April 10, 1802.

To the Editors of the Medical and Physical Journal.

Gentlemen,

THE Epidemic which at present prevails in the metropolis, and in many parts of the country, made its first appearance in this place about the middle of February last, which was some time before its effects were felt in any of the adjacent parishes. The patient, at the commencement of the disorder, complained of chilliness, which was soon succeeded by a high degree of fever with violent pain of the head, generally in the forehead, sometimes in the back part, and frequently all over it, which was a never failing symptom of the disorder. The back was also considerably affected; and, to use the words of most patients, their bones ached all over. Pulse full and hard, from 85 to 100; tongue furred in the middle, with red edges; vertigo with slight delirium at times, particularly in the night; sickness which, when amounted to vomiting, brought up a bilious matter, and procured a temporary relief; costive in general, but sometimes a diarrhœa from the beginning; pains of the legs and some parts of the abdomen, most frequently of the hepatic region; in several, the whole of the abdomen was somewhat swelled and tense, with pain on the slightest pressure, especially over the pubis; urine high coloured during the continuance of fever, depositing afterwards a reddish yellow sediment; no appetite; thirst considerable; restless, inclined to doze, but disturbed by dreams. When the fever had in a great degree abated, a harrasing dry cough began, but in no instance before that time,

time, and several now felt a fixed pain in some part of the chest. The young and robust were uniformly attacked suddenly; and in them the fever ran to a high degree, but they much sooner recovered health and strength than those in whom the symptoms were less severe. A few, on the first attack, discharged a frothy saliva tinged with blood, which disappeared in a short time without any particular consequences. Many, on recovering from the disorder, were affected with a dread and depression of spirits, similar to those labouring under hypochondriasis, but which soon disappeared. Several complained of vertigo while recovering, and it was observable that while this continued, their appetite did not return. Those who had been subject formerly to other diseases, seldom failed having a return, either at the commencement or departure of this epidemic. In one who had frequent threatenings of Apoplexy, it commenced with an apoplectic fit; in another, subject to periodical Epilepsy, it also began with a fit; in a third, who had formerly laboured under an arthritic affection, a severe attack of the gout came on the third day of the fever; in a fourth, subject to hæmoptysis, blood continued to be discharged the whole time of the disease. None, however, suffered more severely nor continued disordered so long as those subject to stomachic complaints. In them, when the disorder was on the decline, cardialgia with all its concomitants, never failed to come on in a very severe degree. Only one (a female) had true pneumonic symptoms, and these yielded to the general mode of treatment employed for the original disorder. Many were affected so slightly as not to require medical assistance.

The following mode of treatment, which was uniformly pursued, succeeded beyond expectation; as out of nearly three hundred cases, consisting of all ages, from a few months old to upwards of eighty years, which came under my care, not one proved fatal. In order to arrest the violent febrile symptoms, the following bolus was immediately administered.

R. Pulv. ipecac. comp. grs. v. ad viij. calomel. pp. gr. j. ad v. pulv. digital. gr. ß. ad ij. conserv. q. s.

This never failed to procure a remission of the symptoms, the skin became relaxed, the patient felt much relieved, and had some rest. The bolus was repeated at an interval of twelve or twenty-four hours, according to the urgency of the symptoms. But in no case was there occasion to repeat it oftener than four times in the first stage of

of the disease; indeed, in general, one or two were sufficient. It may be proper to observe, that when the calomel was omitted, the effect in alleviating the symptoms was very inconsiderable. A few hours after taking the first bolus, two table-spoons full of the following mixture were taken, and repeated every six hours.

℞. Sal. nitri ℈j. ad ʒß. antimon. tartarizat. gr. j. ad ij. spirit. lavend. comp. ʒß. aq. distillat. ℥viij. M.

In general, the first and second dose either cleared the stomach of a quantity of bilious matter, or relaxed the bowels, and sometimes both, with manifest advantage. If, before the exhibition of the mixture, a spontaneous vomiting or diarrhœa had come on, which sometimes happened, a few drops of the tinct. opii were added, by which it produced a greater determination to the skin. The fever was in most cases subdued entirely by the fourth day; in a few instances it continued in a slight degree to the fifth or sixth, when the appetite for food returned. A most distressing dry cough then began, which incessantly harrassed the patient. In some it was removed without much difficulty, but in others various remedies were necessary. The principal which succeeded were small doses of the p. ipecac. comp. conjoined with calomel and digitalis, a composition somewhat similar to the tinct. opii camphorata, but considerably stronger; and tincture of artificial musk. The vertigo and want of appetite, on the decline of the disease, were effectually removed by a weak solution of the antimon. tartarizat. and the stomachic affections were subdued by natron, spt. ammon. comp. colombo, and opiates. The only remedies employed for children were a solution of antimon. tartarizat. with magnesia, and an opiate occasionally. A strict adherence to the antiphlogistic regimen, as it is termed, was particularly proper.

The disease has now entirely disappeared in this place, none having been attacked for these ten days past. From every observation I have been able to make, I am inclined to believe it is not of a contagious nature.

Chobham, Surry,
April 9, 1803.

I am, &c.

ROBERT HARRUP.

To

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE request inserted in your last Number, induces me to send the following account of the late prevailing Epidemic, as it appeared in this neighbourhood, confining myself, however, to a relation of its symptoms and its general consequences. It may perhaps be necessary to premise, that the situation of the town is very high, and that the complaint has been particularly prevalent in it, and the neighbouring villages, (especially those in damp situations, and heretofore extremely subject to typhus mitior and scarlatina) though not entirely free from its effects, yet in comparison to the afflicted in the larger towns, may be said to have escaped.

The complaint, which was here likewise termed Influenza, began with symptoms of catarrhal fever, and first made its unwelcome appearance early in the month of March; and no malady has been more perplexing to the practitioner, nor the contra-indications so various, as the one I am about to describe. For the first week, symptoms appeared mild; those attacked, complained of languor and chilliness; the head (as they expressed it) seemed stuffed up, and a sneezing, accompanied with a sharp defluxion from the nose and eyes, took place. This appeared to me no other than the common effects of coryza, but the troublesome symptom was a dry, hard cough; yet a few were relieved by a pretty fair expectoration from the beginning, while others complained of soreness of the chest, with acute pains in the side. Nausea generally attended, and in some vomiting took place, but without any sensible relief; the head was greatly affected from the first attack, and great prostration of strength was a never-failing attendant; in a very few, delirium supervened. A state of costiveness generally prevailed, and from the beginning the urine was turbid and of a reddish colour. These symptoms increased for a few days, when a free expectoration came on, the cough began to give way, and the urine to resume its natural appearance. In these mild cases, an emetic was premised, and afterwards a bolus composed of pulv. antimon. and pulv. rhei, in doses suited to the habit, but perspiration was easily excited; the cough was afterwards treated with expectorants; the lac ammon. with the tinctura or acet. scillæ was found beneficial;

cial; and after the bowels had been sufficiently open, a gentle anodyne was always serviceable. The pulse was universally weak, small, and frequent.

After the lapse of a few days the disease began to assume a more alarming and Proteus form; patients were attacked with violent pains in the back and head, particularly over the eyes, and complained of great soreness of the limbs, universal languor, and were extremely dispirited. The pulse was accelerated in all, but in some small and thready, (if I may use the term) and in others more full and oppressed. The stomach was always pointed to as sore, and having a load upon it. A dry, hard cough, with a sound as proceeding from a metal tube; and some had a constant rattling in the throat, with difficulty of breathing, like phlegm stopping up the avenues of life. Debilitating sweats accompanied the disease throughout, and were present in every instance. The tongue at first was white, but after a day or two became brown, and in many a black fur covered it. When the cough had continued some days, a most distressing raucedo took place in some, and a few were afflicted with an additional cause for commiseration, a long continued aphonia. The mode adopted for relief was as follows.

First, the exhibition of an emetic of pulv. ipecac. was always premised, which seldom failed of evacuating the stomach of a dark coloured, greenish, and most offensive fluid. Aperients were always rejected when given before an emetic, and an enema was found of no service. The pain in the head was constantly lessened and frequently removed by the vomit, and a freer expectoration sometimes relieved the cough. When costiveness was a very urgent symptom, and appeared to increase the heat and fever, a draught of pulv. jalapii and kali tartar. was given, which never failed of being followed by stools of a peculiar fætor and black colour, and this state of the alvine discharge often accompanied the disease throughout. But evacuations of this kind were required sparingly after the commencement of the disease. Extreme lassitude and debility were the early and peculiar diagnostics of this unwelcome visiter, and a very gentle cathartic has in more than one instance occasioned syncope, and a slow return to convalescence. Had not the cough and state of the pulse, attended with other catarrhal symptoms, accompanied these, I should have deemed it a different disorder, so various and perplexing were the symptoms. Venæsection was very generally inadmissible; in short, out of a great

great number of cases, I do not recollect but two where it was decidedly indicated. The effects of this disease were, a long continued debility, great tendency to relapse, and loss of taste remained long after every other symptom had vanished, even after a return of appetite; and some complained of a saltish taste during their illness. The majority of those in a convalescent state received benefit from the following. ℞. Infus. colomb. ten. ℥vj. natron prep. ʒjß. tinct. colomb. ʒij. M. f. infus.; of which a small wine glass full was taken three times a day. Broths and oily medicines always disagreed with the few they were allowed to on the first appearance of the disease, before its nature was better known; and the sweats were relieved in many by the use of the acid. muriat. in common drink; oranges were eagerly coveted by the sick, and freely indulged in.

From observations made during the progress of the disease, I am inclined to believe it contagious from atmospheric influence, (and originating from that cause) and not from animal infection, though it generally affected a whole family where an individual of it fell ill. Though in the beginning a cautious depleting practice might have been judiciously employed, the sequel convinced me of the alarming tendency of this Proteus disease. How Nosologists will class this Epidemic, I cannot say; but many symptoms of it may be found in the Coryza catarrhalis of Sauv. sp. 1; though, perhaps, the Catarrhus a contagio of Cullen, or Epidemicus, sp. 3. of Sauvages may be most proper.

I am very conscious of the imperfect manner in which I have drawn up these observations; but a compliance with your request was the motive for my sending them, and not the *cacoethes scribendi*.

Stow on the Wold, Gloucestershire, I am, &c.
April 16, 1803. T. W. WADLEY, Surgeon.

P.S. Blisters to the stomach were very useful.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

YOUR call for contributing any practical information, which promises to be extensively useful by publication, on the prevailing catarrhal affection, under the name of *Influenza*,

Influenza, is rendered truly imperious, by the ravage it is still making in certain circumstances.

It may be more curious than instructive to enter into a lengthened disquisition on the origin of this epidemic malady, but a brief inquiry into its probable source will most likely best illustrate the mode of treatment which, when early resorted to, has proved under my direction invariably successful. It is not difficult to admit, that the very variable course of atmospheric temperature, which has distinguished the weather during the four preceding months, must as usual have impeded, in weakly and irritable temperaments, an equal and salutary distribution of the circulating fluids. It is also no less obvious, that a surcharge on the lungs, more particularly on the bronchial glands, would be more quickly announced by the characteristic symptoms of coughing, difficulty of breathing, and the other common criteria of catarrhal ailment, than could occur if the redundancy should alight on any other organ. This pulmonic precedency in morbid influence, from diminished perspiration and consequent vascular tumult, serves at once to induce and further invite diseased determination to the lungs. The continuance of this affection, whether from its original violence or mis-management, associatively excites diseased actions throughout the system. The hepatic organ occasionally sympathises to the extent of burthening the first passages with an increased quantity of its bilious secretion. When the more pure catarrhal aspect of the complaint has been disfigured by this morbid redundancy of bile, a yellow hue has both pervaded the cuticular surface, and tinged the various secreted fluids. This icteric accompaniment imparts to the disorder an unsightly mien, which, in connection with the prevailing febrile agitation, extreme debility, and mental depression, may impose itself on either the timid or inexperienced, as allied to the memorable yellow fever, which lately, by its desolating fatality, so deplorably thinned the population of America. Whatever disguises may happen, either from temperamental or accidental causes, the *influenzal* epidemic of the present period, in no instance, loses either its catarrhal form or nature. It tenaciously retains its specific character throughout its progress; nor even in the shades of death does it exhibit a typhoid feature. It is unquestionably contagious, so are common catarrhs; in this respect it differs only in the *majus* and *minus*. The existing *influenza* induces these changes in the salutary state of pulmonary action that arrange, constitute,

stitute, and evolve a peculiar halitus, which reaching the tracheal membrane, impresses its excitability, and generates an action, as specific of its own nature, as could be respectively produced by variolous, vaccine, venereal, morbillous, or any other description of virus.

The contagious power of this malady is in general traceable by personal intercourse. It may indeed individually originate in the physical circumstances which were before observed to have given it birth; but the prevailing unimpressibillity of the human temperament, by the operation of general causes, requires for its propagation, the concentrated power it obtains from organic preparation. It is no objection to the contagious nature of this disease, that it is not universally operative. Temperamental insusceptibility to be impressed by morbid powers, occasionally resists the utmost force that could be exerted short of positive disorganization.

This counter-acting inaptitude is not unfrequently manifested in the most indubitably infectious diseases incident to human nature.

Morbid actions, of whatever description, generate and evolve a certain power, whether material or motive, capable of inducing a similar action in apt circumstances of temperamental susceptibility; but happily for mankind, this necessary fitness to give effect to contagious agency, does not often exist; and perhaps the capability of originating as well as the liability of taking diseases may be more justly imputed to the errors of social than of natural life.

The catarrhal form of the *influenzal* disease, implies that it is of an inflammatory nature. The severe local irritation which often obtains in different parts of the lungs, confirms it to be of that description.

The intention of cure then, must be exclusively directed to reducing the inflammatory action more or less violently stationed on the bronchial membrane, and sympathetically extended to the system at large; reflection obviously suggests, what experience has abundantly proved, that this indication is most effectually fulfilled, by observing a uniformly *cooling*, not *debilitating** plan of treatment.

The

* It is an erroneous notion that occasional refrigeration and abstinence in disease, weaken more than a heating and stimulating treatment. The native energy of healthy power is certainly reduced both by the abstraction

The patient should abstain from every kind of stimulant, whether dietetic or medicinal; the apartment should be without fire, and incessantly ventilated, occasionally from the window, and constantly from the door; or if strength will permit, confinement in bed should be avoided, and atmospheric exposure, in shady situations, should be preferred. Small quantities of cold water, or toast and water, not exceeding a wine-glass full at a time, should be drank every ten minutes.

If recourse be had to this treatment in the incipient stage of the disease, the complaint will not differ from the slightest attack of catarrh; the local pain will soon cease, and with that, the systematic irritation, dyspnœa, cough, and expectoration. On the contrary, if the plan should be delayed, (as it has in several instances where my advice has been desired) the disease will have suffered much unnecessary aggravation, the patient will breathe tightly, often laboriously, the pulse will become rapid, small, and hard, cough dry and urgent, skin hot and parched, thirst insatiable, local pain unremitting, countenance yellow, debility extreme, nausea incessant, and mental depression distressingly irksome.

Under these circumstances it is highly probable that the disease has been thought, if not originally typhoid, to have now evidently become so. The treatment which would be appropriate to this opinion, according to the prevailing (but in my judgment, erroneous notion of putrid disorders) would so insure, and precipitate the dissolution of the patient, as to preclude all calculable chance of escape.

My experience authorizes me to say, that the benefit of abstracting heat, by atmospheric exposure, light bed-clothes, copious dilution with cold water, and avoiding stimulants of every description, will almost certainly rescue the patient from danger, and leave nothing more for medicine to do, than gently to move the bowels in case of costiveness, and at most, to aid in the refrigerating plan, by the milder sudorifics, such as the aqua ammonia acetata, spiritus ætheris nitrosi, spiritus ætheris vitriolici, vinum antimonii tartarisati, &c. The custom of diluting with steaming fluids, though slender in quality, is hurtful. They do not transfer redundant heat like cold liquids.

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tion and increase of excitement, but by its due diminution vital force may be said to be nursed, while undue stimulant agency tends to dissipate it even to extinction; hence a moderate negation of excitement debilitates much less *directly*, than its excessive employ does *indirectly*.

The

The salutary influence of this treatment is evinced by perspiration soon following a course of dilution with cold water. The morbidly contracted state of the cuticular exhalents, from the excitement of disease, is increased, not diminished by either stimulating or warm fluids. This diseased condition, so obstructive to salutary perspiration, is naturally and quickly overcome by diluting with cold liquids, and atmospheric exposure.

The local pain may be subdued by the application of a blister over the aggrieved part, or when not urgently violent, more commodiously by a stimulant ointment, composed of antim. tartarisat. dram. j. adip. suillæ unc j. gradatim conterantur. The bulk of a nutmeg of this ointment may be rubbed on the chest, or over the affected part, every eight hours, until pustular eruptions be produced, which usually follow within twenty-four hours. It may be expedient to support this eruption for some weeks, or at least during the period of convalescence, to obviate a relapse of morbid determination to the lungs. Indeed, the counter stimulus induced by the continued topical application of this ointment, unremittedly acts as a salutary derivant from the morbidly irritable membrane investing the trachea, and its bronchial tubes, thereby tending to prevent an habitual establishment of the diseased action, which, though yielding in its more acute form, may entail a lingering duration, ultimately productive of tubercular lesion, and consequent pulmonary consumption. Bleeding is not indicated in this disease, nor is brisk intestinal evacuation. The debility which ensues either of these attempts to relieve, is not compensated by a proportionate diminution of the local pain, while the reduction of systematic energy farther deranges the natural distribution of the vascular fluids, loads the diseased parts, and either induces a necessity for tedious expectoration, or occasions a suffocating degree of serous effusion in the bronchia.

The debility, whether direct or indirect, induced by excessive evacuation in the former case, and by stimulant means of cure in the latter, has in most of the fatal instances in my knowledge, probably occasioned an irremediable effusion in the bronchial tubes; irremediable, because the existing arterial atony has been incapable of urging the effused fluid into the lymphatic course of serous circulation.

It is always inadmissible to reduce systematic energy, either by inordinate evacuations or excessive excitement, when the native conditions of health may be efficaciously restored

restored by repressing the morbidly stimulant influence of heat. An unremitted course of suitable refrigeration keeps the *Influenza* of the present season within safe limits, resists the evolution of threatening symptoms, and ensures it a healthful termination.

An importunate sense of duty irresistibly prompts me to request, that you will insert in the next number of your Journal, this hasty sketch of my opinion and practice, relative to the prevailing Epidemic, with a view to suggest to the medical world, that the disease does not appear to differ in any essential circumstance from common catarrh; that its disguised, and worst forms, as well as its fatal termination, seem to have arisen more from a want of timely, uniformly, and perseveringly reducing the prevailing temperature, by a rigidly cooling plan of treatment, than from its malignant or mortal nature; and finally, (what is not sufficiently adverted to) that the early institution of this mode of remedy, most advantageously obviates that extreme degree of indirect debility, which a neglected or delayed observance of it occasions, by permiting the exhausting career of morbid conflict to proceed unchecked, by which the period of convalescence is vastly protracted, and glandular consumption, with other fatal forms of chronic affection, imminently endangered.

I am, &c.

Taunton,
April 27, 1803. ROBERT KINGLAKE.

An Account of the EPIDEMIC CATARRHAL FEVER, *or* INFLUENZA, *in Manchester, together with some general Remarks on this and* SIMILAR EPIDEMICS; *communicated by* SAMUEL ARGENT BARDSLEY, M.D. *Physician to the Manchester Infirmary, Dispensary, and Lunatic Hospital.*

I Make no doubt but the prevalence of the present epidemic disorder will attract the attentive observation of a great many of your medical Correspondents. It is only by collecting and comparing facts and observations, from practitioners in various parts of the kingdom, that a correct and complete history of this widely-extended disease can be expected to be established. To assist in accomplishing part of this plan, I propose, first, to describe such particulars relative to its history and treatment as have been furnished by my own observations and experience, and then to subjoin a few remarks on the present and other similar epidemic disorders. The

The Influenza appeared in Manchester as early as the first week in February, but extended itself for some weeks in only a partial and confined degree; I met, however with no instance of the disease, either in public or private practice, prior to the beginning of March; many other practitioners likewise assign this latter date as the period of its commencement: yet I am able to state, upon the unquestionable authority of my friend, Dr. Percival, that the disease manifested itself, in his own family, on the 4th of February; and from the best of his recollection, it occurred in several cases during the early part of that month. It does not, however, appear to have spread throughout all parts of the town, until the second week of March.

I find it exerted its greatest influence among the lower order of the inhabitants, between the 26th of March and the 2d of April. This is evident from the number of patients, entered into the home-patient books of the Infirmary, having exceeded in a four-fold proportion that of any other week since the commencement of the year.—Most of these cases which came under my care, were of the worst kind, and such as required admission into the Fever Wards, or House of Recovery. A still greater number of the poor, who suffered by the disease in its milder form, were treated as out-patients of the Dispensary. But its influence was by no means partial; in two respectable families, all the servants, to the number of seven in one instance and six in the other, were afflicted at the same time. Heads of opulent families and very young children, form a comparative exception to its indiscriminate attack.

The Faculty agree in opinion, (as far as my inquiries have extended) that no other instance of an epidemic, so generally prevalent, has been noticed in this town. It is not an exaggerated calculation, to estimate the number of persons afflicted with this malady at one-tenth of the whole population. One practitioner has attended, within a month, upwards of three hundred patients, chiefly amongst the middle class of the inhabitants. The epidemic, in its genuine form, exhibited the following symptoms: Spontaneous weariness and languor, succeeded by slight shiverings, with alternate flushings of heat, first attack the patient; he then complains of a deep seated pain in the course of the frontal sinuses, accompanied, for the most part, with sneezing and a profuse discharge of lymph from the nose and eyes. In the space of a few hours, acute darting pains in the muscles subservient to respiration,

tion, attended with a tickling cough and hoarseness, frequently occur. As the disease advances, the patient complains of much anxiety about the præcordia, dull, aching pains in the back and knee-joints, and of great debility, languor, and depression of spirits. The tongue is early covered with an extremely white mucus, and has the appearance of having been suffused with milk. The pulse is rather small and quick, (seldom if ever hard and full) its number of beats exceeding an hundred, and often during the evening exacerbations one hundred and twenty in a minute. The tongue being moist, little or no complaint is made of thirst. Costiveness, for the most part, prevails. The appetite is not only entirely lost, but a fixed loathing to any solid food is expressed. A degree of cardialgic nausea, often succeeded by vomiting and griping pains in the bowels, torments the patient upon the second or third day of the attack. On the third evening, and sometimes as late as the fourth, the disease seems to have attained its acme. The cough, fever, and debility, with increased irritation about the fauces and breast, greatly harrass the patient; and it is only after a night spent in restless inquietude, with delirious wanderings, that he enjoys from a slight repose in the mornihg, some respite from these distressing symptoms. A cough, generally moist, with impeded respiration, and pricking heat in the throat and breast, continues after the febrile symptoms have, in a great degree, subsided. The appearance of the urine on the fifth or sixth day, denotes the diminution of the fever. It deposits a copious sediment, and changes from rather a pale and limpid hue to a deeper and more natural colour. Great prostration of strength is still perceived, and the patient is seized with sudden faintings upon any attempt to raise him from an horizontal posture.

The above description is only intended to apply to the genuine, unmixed form of the epidemic. Modified by age, sex, and temperament, and (admitting it to be contagious) by the circumstances under which contagion was communicated, it manifested a remarkable diversity in its effects upon different subjects; yet, in every case, some degree of resemblance might be observed. Its distinctive character was never completely lost. A sudden prostration of strength, lassitude, constriction, and pain in the forehead, together with watery discharges from the eyes and nose, feverish chilliness and heat, unaccompanied with a correspondent degree of derangement in the arterial system the existence of some or all of these symptoms, in a combined

combined or separate state, sufficiently characterize the epidemic.

A great difference was noticed in the nature and degree of the local affection of the breast and fauces. In some, the mucous membrane was but slightly inflamed; in others, great pain and difficulty in breathing, and universal rawness and soreness in the trachea and chest, indicated more extensive inflammation. But in two * instances only evident symptoms of pneumonic inflammation occurred. Many were solely affected with the prominent, and indeed almost pathognomonic symptoms, of intense pain in the head, and general debility; either sickness or diarrhœa, with transient shiverings and debility, unaccompanied with any catarrhal affection, marked the existence of this disorder in many delicate and irritable constitutions.

The medical treatment of this Epidemic admitted of considerable variety; yet from its prevailing character of debility, as manifested by a weak and quick pulse, disturbed state of the stomach and bowels, and general derangement of the animal functions, the chief attention was directed to moderate the febrile symptoms, and to support the powers of life. Many, it is true, required little or no medical aid; but most of the patients, who fell under my care in the House of Recovery, laboured under the disease in its most aggravated and complicated state. Emetics were found highly beneficial on the first attack; indeed, the frequent occurrence of spontaneous nausea and sickness pointed out their use. They scarcely ever failed to relieve the urgent symptoms of pain in the head and stricture of the breast. To obviate costiveness, and at the same time to cleanse the primæ viæ, moderate doses of calomel with rhubarb and antimonial powders combined, were exhibited with excellent effects. When much pain and soreness in the head and breast were felt, attended with a hot and dry skin, either pediluvia or fomentations of the feet and legs with flannels wrung out of hot water, sensibly relieved the patient, by exciting a gentle moisture

* One of the cases proved fatal. The patient, a boy of fifteen, had laboured under cough, dyspnœa, and slight hectic fever, previously to the attack of the epidemic. On opening the thorax, soon after his death, strong adhesions were discovered between the left side of the lungs and the pleura; marks of inflammation extended to the pericardium, and even to the heart, its apex being found covered with coagulable lymph. On cutting into the left lobe of the lungs, a considerable quantity of purulent matter oozed out of its cellular substance.

on the surface of the body. To moderate the febrile symptoms, small doses of antimonial wine, combined with spt. æther. nitros. and neutralized ammonia, were almost invariably employed. The local affection of the breast yielded almost uniformly to the application of blisters; even when the pain in the chest was severe and deep seated, attended with impeded respiration and a teazing cough, this remedy seldom failed in affording speedy relief. If an excruciating pain and confusion of the head, turgidity in the vessels of the eyes, and great impatience of light, indicated a more than usual determination of blood to the brain; bleeding with leeches at the temples, and blistering the forehead and nape of the neck, were successfully put in practice. The patient was ordered to be kept in bed, with his head and shoulders moderately raised, until the giddiness of the head and general debility were removed. Opiates were seldom employed during the first stage of the disorder, as they had a tendency to exasperate the complaints of the head and chest, and increase restlessness and feverish heat. When the cough was incessant, and sharp wandering pains affected the breast and muscles subservient to respiration, attended with a rapid and somewhat hard pulse, the addition, in small doses, of the tincture of digitalis, to the saline and diaphoretic medicines already mentioned, not only mitigated the cough, but likewise promoted expectoration, and induced sleep. The usual degree of tickling cough, and soreness of the fauces and breast, was relieved by the frequent use of barley decoction, with gum arabic; or linseed tea, acidulated and rendered palatable by liquorice root. Oily medicines were neither useful nor much relished by the sick. Wine, in gruel or whey, formed a powerful auxiliary in supporting the strength, and preserving a moderate and equable moisture on the skin. In very few cases did symptoms of local or general excitement prevent its administration; indeed, it was found necessary among the Infirmary patients, to counteract febrile debility, after due evacuations of the stomach and intestines, by a light nutritious diet, and a moderate use of wine. Tonic bitters, with the mineral acids, proved useful in checking profuse discharges by the skin or lungs, and contributed likewise powerfully to restore the general health. The lancet was very seldom employed; in only two instances it was deemed necessary to use general bleeding; and even topical depletion of the vessels was rarely adviseable. To subdue the obstinate cough and copious expectoration

pectoration of aged people, and those afflicted with asthma, or other pulmonic complaints, small combined doses of opium, digitalis, and calomel, along with bark and other tonics, were generally employed. By the above method of treatment, varied according to circumstances, the worst cases were discharged cured from the House of Recovery, in about an average period of twelve days. Notwithstanding the universality of the epidemic in this crouded and very populous town, few have fallen victims to its severity, and those who died were for the most part old, asthmatic, or other debilitated subjects. Within the last fortnight I have seen several instances where this disease degenerated into typhus, and the patients incurred great risk of recovery. Under proper management, however, it may justly be termed a disease of safe and speedy termination. Relapses do not appear to have been very frequent. I have met with but few who have suffered a repetition of the worst symptoms of the disorder. It has now (the 26th of April) almost disappeared in this town; but is exerting its influence in full vigor throughout the populous places of the vicinity.

General Remarks on the present and other similar Epidemics.

The similarity of the present Epidemic Catarrh to those which, at various periods, have infested Europe and other parts of the globe, cannot be disputed. Dr. Cullen, in his Nosology, has quoted authorities to prove the occurrence of a contagious malady of this kind, at no less than thirty distinct periods, from the year 1323 to 1767. On referring to these authorities, its different degrees of resemblance may be traced between the histories of all these several epidemics. But the years 1762 and 1782,* furnish the strongest proofs of identity between the contagious diseases then prevailing in this island, and that which now exists.—What are the remote and predisposing causes of this widely extended malady? and in what does its nature and essential character consist? are questions concerning which medical writers greatly differ. The present epidemic cannot have originated, in this part of the kingdom, from any remarkable severity of weather, or sudden changes in the temperature of the atmosphere. No season has been apparently less unfriendly to the human constitution than the whole of the late winter and early part of spring. This will

* See Medical Transactions, Vol. ii. p. 54.

will appear from the following summary statement of the weather, since the year commenced.

January. Till the 10th, mild and cloudy.

February. From January 10 to February 12, uniform frost, without much intension or remission. Mostly fine and clear with little snow.

After the 12th, showery weather, with gleams, to the end of the month.

March. For two days heavy rain; from this to the middle of the month, frosty nights but mild days, with little snow or rain; the rest of the month rather warm for the season, and little rain.

April. Till the 17th uncommonly fine and warm for the season; remarkably drying winds.

The barometer has been no way uncommon during the season; the winds have been principally N. E. and S. W. as usual.

If alternate severe frosts and chilly moist weather, (the usual sources of common catarrh) were the origin of contagious catarrhal fever, how are we to account for the universal epidemics of 1762 and 1782, prevailing during uncommonly warm and steady weather, in the months of May and June? Moreover, that remarkable epidemic catarrh of 1580, (which according to Sennertus, "Totam pene Europam, imo fere omnes mundi regiones pervagata est,") chiefly raged during the sultry weather of autumn. We must therefore enquire for some other cause than a change in the sensible qualities of the air, to explain the origin of this disease. That it is gradually disseminated over large portions of the globe, from contagious particles in the atmosphere, is an hypothesis generally maintained. The numbers attacked at the same time by the disorder, and the enlarged sphere of its activity, are facts which seem to support this opinion. Yet when we consider the confined operation of the atmosphere in conveying contagious particles, and how soon they are dissipated or diluted, if not chemically changed, by admixture with this fluid, so as to render them totally inert, and incapable of producing disease, (facts strikingly exemplified in the instances of plague and small-pox) we shall hesitate in giving implicit assent to this doctrine. If the general mass of air were contaminated, how are we to account for the slow and gradual progress of the malady? A cause so universal ought to have produced correspondent effects. All the sick should have been afflicted nearly at the same time; yet it appears to have raged in Paris some weeks previous to

to its appearance in London; and the same length of time was occupied in its progress from the latter city to Manchester. Its capability of being conveyed from one human subject to another, or contagious nature, has been equally a matter of dispute; but that it is a disease of a contagious kind, arising from a specific materies morbi, and readily communicable from one person to another, is rendered probable from various facts, as well as from its analogy to other contagious disorders. Its appearance here, although rapid, was progressive. It spread like other infectious maladies, more particularly among those exposed by their greater intercourse with each other to the danger of contagion. Female domestics, and the inhabitants of the nursery, seldom escaped its influence.

A gentleman of this town returned from London, in the third week of March, while labouring under Influenza. He found his family all well; and unconscious of the infectious nature of his complaint, he bestowed the usual caresses upon his children. Three of them sickened the next day, and two more on that following.

But the most compleat and satisfactory evidence of the propagation of this disease by human contagion, (I had almost said the only mode in which it is communicated) is derived from what happened in the Manchester Lunatic Hospital; none of the patients were afflicted with the epidemic (although permitted to walk out daily in the airing grounds) until the keeper and matron became affected. In consequence of their attention, while labouring under the Influenza, to some elderly patients, whose situation demanded more than common care, they communicated the infection to five of the persons thus circumstanced, while all the rest, to the amount of eighty and upwards, entirely escaped the complaint. The house-servants, who are solely engaged in domestic employments, and are never permitted to associate with the Lunatics, suffered more or less severely by the disorder. Thus it would appear, that a careful exclusion from infected persons is probably the most certain preventive method of obviating a malady so universally prevalent.*

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* I have just been made acquainted with the high importance of such precautionary means to at least one class of the sick and feeble, predisposed to this infectious malady. Six puerperal women have fallen victims to the attack of the epidemic. One intelligent midwife lost five patients within ten days. This is so important a fact, and shews the necessity so strongly

The nurses of the House of Recovery fell sick, soon after the reception of the first cases of the malady, notwithstanding the usual preventive rules against infection were strictly followed. At Rochdale, I have been assured, the origin of the disease was distinctly traced to some gentlemen who had brought it from Lancaster, where they had attended the assizes.†

The next important question relates to the nature and essential character of the disease. Much diversity of opinion has prevailed on this point. It is however of the utmost importance to be ascertained. From my own observation of its prevailing symptoms in this place, I am disposed to consider it essentially a contagious febrile disease. The sickness, languor, faintings, pain in the head and loins, with a small quick pulse; all demonstrate the character of this fever as arising from a debilitating cause.

This general state of the disorder ought never to be lost sight of in practice. The mucous membrane may be more or less diseased, and even active local inflammation may occasionally prevail; but the former is not necessarily attended with general excitement, and the latter is only to be considered as an anomalous symptom, dependant on peculiarity of constitution, or some other accidental circumstance. Great mischief will arise from confounding its occasional varieties with the permanent and specific character of the disease. Thus we learn from Sennertus,‡ that in the Epidemic Catarrh of 1580, incalculable injury ensued, from a partial view of the *local* symptoms, as indicating a disease of a purely inflammatory kind. He mentions

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strongly of strict seclusion from the risk of personal infection in all puerperal cases, that it cannot be too generally promulgated. Have similar fatal instances occurred to practitioners in midwifery in other places? And are puerperal women remarkably predisposed to the attack of this epidemic? are queries highly interesting to the Readers and Correspondents of the Medical and Physical Journal.

† The following extract of a communication from Mr. Tomlinson, of this town (a gentleman of accurate observation and extensive practice) still farther strengthens my opinions concerning both the contagious nature and essential character of the epidemic.

"I am confirmed in opinion that it is a *febrile* disease, attended with extreme debility, and so *highly contagious*, that I have often witnessed it spread through large families of those who are in a middle station of life. I have frequently remarked, that debility succeeding intoxication, to be a strikingly predisposing cause, even in those constitutions, apparently, least liable to be attacked. I have not met with many instanc s of its fatality, except in those labouring under previous disorders."

‡ De Febrib. lib. IV. cap. XVIII.

mentions the "Tussis sicca, dolor pectoris et præcipue septi transversi; faucium asperitas, ventriculi languor; tandem gravis anhelitus, &c. as symptoms which induced many practitioners to make free use of the lancet; but with such mortal effects, that in the city of Rome alone, where bleeding was promiscuously employed, more than 2000 persons perished. On the contrary, where this evacuation was altogether avoided, the mortality did not exceed more than one in a thousand. "Experientia (says this judicious writer) enim hoc comprobavit; omnes fere mortuos esse, quibus vena aperiebatur."

In the Epidemic Catarrh of 1733,* (one of the most universally prevalent of any upon record) bleeding was generally found to aggravate the symptoms. It raged in Edinburgh, during a cold and severe spring, when inflammatory complaints commonly abound; yet the practitioners of that place observe, "a few of the sick were at once seized with ugly faintings; when bled they recovered more slowly; but when supported by cordials they were soon well." A lesson of caution not to be neglected in the treatment of the present epidemic. Its special observance by the Faculty here has been attended with the best effects. Indeed, the constitutions of the generality of the inhabitants of this and most other populous and manufacturing towns, will not admit of debilitating remedies, in the same degree, as maybe safely put in practice among more temperate and more robust classes of people. It will not be denied that venæsection may be found useful in combating occasional symptoms of this epidemic malady; yet great care must, at all times, be observed in not too far depressing the system by its injudicious employment. The following admonition of Forestus, in his Scholia on the Catarrhal Epidemic of 1580, should be strictly attended to:—"Oportet igitur diligenter distinguere, quibus venæsectio conveniat, & quibus non, juxta indicationes curandi, vel sanguinis mittendi, quæ vel admittant, vel omnino dissuadeant."

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* See Edinburgh Medical Essays, Vol. II. Art. 2.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I DID not intend mentioning my opinion at present of the causes of fatality in the two children whom I inoculated with genuine Vaccine fluid, and whose cases are concisely stated in your last Journal, had it not been that some of the friends of the new Inoculation appear somewhat alarmed, lest it should excite an unfavorable opinion of its effects on peculiar constitutions; I therefore feel it a duty incumbent on me to remove any doubt which may arise from such an idea.

From the conversation I had with several medical gentlemen at the time of these cases existing, I could not find they had ever met with a similar occurrence. This I consider as a very strong argument that the illness was wholly independent of Vaccine influence. I thought it was probable some of your correspondents would notice the cases, and make some comments thereon, which would have produced a reply from me according to their remarks; and if it should appear that such have not occurred to others, it would tend much to strengthen the opinion, that the Vaccine disease had no connection with the convulsions, or their effects.

It was the opinion of those gentlemen to whom I related the cases, that the affection of the stomach and intestines, to which the convulsions succeeded, was that kind of accidental attack which would equally have produced its effect if the children had not been under the influence of Vacciola. The short period of existence after the attack in the *first* child, precluded that investigation which could have been wished.

During a period of six weeks, the second child had convulsions daily, but was at intervals sensible; the diarrhœa and vomiting were but slightly restrained during the whole subsequent illness; the pustule on the arm dried up but never fell off. I wished much to have inspected the body, but could not prevail on the parents to permit me.

At first I found the parents somewhat inclined to attribute the convulsions to the effect of Vaccination, which I strenuously opposed, and ultimately convinced them, that no connexion existed between the two diseases.

Convulsion, as an idiopathic disease, has been considered as one of the most frequent to which children are subject, though

though I believe more have been considered such than facts would warrant.

As a symptomatic disease, convulsions are very frequent. Dr. Underwood, in his Treatise on the diseases of children, says (vol. i. page 159) "The younger and *more irritable* an infant may be, it will be so much the more liable to *symptomatic* convulsion, especially from any considerable *disturbance in the first passages.*

It was very evident the attack in each of these cases commenced in the primæ viæ; the whole alimentary canal was thrown into violent spasmodic action, first the stomach and then the intestines. In the first child this irritation was so great as to excite immediate convulsions, soon terminating its existence. In the second, though the attack was equally violent, the constitution was capable of resisting its effects a greater length of time.

I should therefore infer, that the convulsions were produced by the morbidly increased action of the primæ viæ, and that those morbid actions were induced either by the presence of accumulation in the stomach or by the specific action of miasma. I should be inclined to attribute them to the last, in consequence of similar attacks both in infants and adults, at that period being somewhat epidemic.

I shall take the liberty of troubling you with another case of the Cow-pox, from the circumstance of its being particularly striking in resisting the contagion of Small-pox.

I was desired to attend the son of Mr. Prosser, of Holborn, who on the following day had an eruption, which proved to be the *small-pox*, and that of the confluent kind, attended in the secondary fever with delirium and very slight hopes of recovery. This child was reported to have had the small-pox three years before, when on a visit in the country. Mr. P. had an apprentice, whom he and myself endeavoured to persuade to receive the Vaccine protection by inoculation, but without effect, till the eruption of small-pox had made its appearance on the son nine days, at which it was at its crisis; he then consenting, I inserted fresh Vaccine fluid into the arm of the apprentice, *(who till this period had always been in the same room with the son, and* SLEPT *with him)* without hope of its having the desired effect; the arm shewed marks of inflammation on the third day, and was very evident on the fourth, continuing regular in its progress, producing the characteristic areola as well as soreness in the axilla. I observed on the eighth day the pustule did not look favorable, and I suspected

pected it had been rubbed; but was informed the boy had seen his mother the day before, who having a strong aversion to the Cow-pox, had prevailed on her son to endeavour to eradicate it, which the boy was seen by his mistress attempting to do soon after he went to bed, by picking open the pustule with a pin. The two lads continued living in the same room together till the present time, a period of more than three months; the son recovered, and the apprentice was not affected by actual contact with the small-pox patient. I am, &c.

Tooley Street, April 20, 1803. I. F. WAGSTAFFE.

REPORT *of the* BOMBAY MEDICAL BOARD, *dated July 2, 1802*

To the Editor of the Bombay Courier.

FOR the satisfaction of the public, and the information of professional men in India, we beg of you to publish the following account of the introduction of the Cow-pox into this place. We have it now in our power to communicate the benefit of this important Discovery to every part of India, perhaps to China, and the whole eastern world. We shall spare no pains in accomplishing a purpose so desirable, by which one of the greatest evils that has afflicted humanity may be diminished in a great degree, or even extinguished altogether.

In the course of the last twelve months we have repeatedly received by sea, from England, the Vaccine matter, with which many children have been inoculated to no purpose. We were not more successful in matter which was sent to us directly by land from Constantinople. Fortunately, Doctor Short, a surgeon of this Establishment, residing at Bagdad, produced the disease at that place. He immediately forwarded the matter to Bussora, where Mr. Milne, surgeon of that residence, also succeeded in infecting a patient with it. Mr. Milne soon afterwards inoculated a number of other children, and he sent the Vaccine matter to Bombay by several ships. Even with this matter, we were for a time unsuccessful, and after thirty or forty trials by various methods and by different surgeons.

A fortunate inoculation at length produced the Vaccine disease in Anna Dusthill, who is, perhaps, the first human being

being who underwent it in India. This child, the daughter of a servant of Captain Hardie, is about three years of age. She is very healthy, and certainly never had the Small-pox. It is necessary to mention these circumstances, as from her alone, the whole of the matter that is about to be sent all over India, was at first derived. We have received no history of the patients from whom it was taken at Bagdad and Bussora, but we rest with confidence, from our knowledge of the medical gentlemen at these places, that no pains have been spared to pass it through unexceptionable bodies.

From Anna Dusthill, on the 8th day of her disease, and on the 22d of last month, seven children were inoculated; five of those, who certainly never had the Small-pox, took the infection, and have already gone through nearly the whole course of the Vaccine disease. The other two were not infected, but there is some probability that one of them has had the Small-pox. From the five children that were infected, about thirty more have been inoculated, and a great many of them, no doubt, will take the disease. From these last we shall send the Vaccine matter to the other presidencies, to Surat, Poona, &c. and care shall be taken that none shall be employed but from an unexceptionable source.

The Vaccine disease in Anna Dusthill, passed, as we have said, through its ordinary course, as described by writers on the subject. The pustule began to show itself about the third day; during the course of the fifth and sixth she had slight symptoms of fever, and some uneasiness in the arm-pit of the inoculated side. The pustule on the eighth day, was of the proper size for that period; it was flat, rather concave, and it consisted of many cells, which on being pricked, gave out a transparent fluid; by the tenth day, the inflamed areola round the pustule was extensive and very distinct in spite of the blackness of her skin. She had only a single pustule on the inoculated part, nor during the whole time did she suffer any material inconveniency from the complaint.

All the five children who were inoculated from her, had a similar train of symptoms; on two of them, whose parents were Europeans, the inflamed areola, from the whiteness of their skin, was much more distinct than it had been on Anna Dusthill. We have thus detailed the progress of the symptoms, and we have, no doubt, but that this is the genuine Cow-pox; some surgeons here, who have seen the disease in Europe, are of the same opi-

nion.

nion. We hope, therefore, that this will tend to quiet the apprehension of parents, which in some instances we find to be very great, and that our experience at this place, so far as it has gone, will give confidence to practitioners. Almost all the medical men at this presidency have witnessed this disease, many of them are inoculating for it, nor do we understand that any difference of opinion has arisen concerning its nature.

One test, indeed, we still want of its genuine nature, and that is, its power of preventing the variolous infection; to this test it shall shortly be put. As this island does not contain less than 150,000 people, sufficient supplies of children must arise to keep up the disease, even without any dependence on Salsette or the neighbouring Continent.

The Hindoos and Parsees, both here and at Surat, show the utmost desire of having their children inoculated with the Vaccine disease. We shall instruct the native practitioners of physic regarding it; but on this part of the subject we are not without apprehensions. Whoever is sufficiently acquainted with what has been done in Europe, with regard to the Cow-pox, is aware that some foreign poison, such as that of the Small-pox, is apt to be mixed with it, when a compound disease arises; or some other poisonous matter may be, from various causes, introduced instead of the Vaccine virus, when a disease altogether different is produced. The History of the Count de Moffet, as lately detailed by Doctor de Carro, affords a most instructive lesson on this subject. The greatest care therefore should be employed to warn the native practitioners, that the Vaccine matter may be degraded by many causes, and that their utmost attention is necessary to prevent it. We can affirm, from our own knowledge, that this government has anxiously assisted our wishes for procuring the Vaccine disease by the way of Bussora. They represented to Lord Elgin, the importance of it to this great society of mankind, and they called for the aid of the Residents of Bussora and Bagdad. Doctor de Carro, of Vienna, who has distinguished himself so honourably in this career, transmitted in the first instance the Vaccine matter to Lord Elgin, who several times before had shown us his attention to the subject; by his Lordship's orders it was sent to our resident at Bagdad, and again to the resident at Bussora. To both these gentlemen the public are under great obligation for the interest they took in the subject. Finally, it fell into the hands of Doctor Short and

and Mr. Milne, as we have already said, nor could it have been more fortunately placed.

We have been more particular than was necessary for the medical profession, who must be supposed to be in possession of every fact that has occurred on the subject in Europe; but as we shall disperse the Vaccine disease very widely, as it will affect, and as we hope it will promote the happiness of every family, we wish to satisfy the public at large, concerning the source from which we have derived it, and the foundation of our belief that it is of a genuine kind.

July 2, 1802.

W. MOIR.
H. SCOTT.

To WILLIAM SANDWITH, Esq.
Secretary to the Medical Board at Bombay.

SIR,

I Have sincere pleasure in acquainting you, for the information of the Medical Board at Bombay, that after various failures at the different stations on this island, the Vaccine Inoculation has at length happily succeeded at Trincomallie, with matter taken from the arm of a child of European parents at Bombay, on the eighth day from inoculation, being the 10th of July.

This matter was sent by Mr. Helenas Scott, under cover to Mr. North, and did not reach Trincomallie till the 11th of August; several patients were on that day inoculated with this matter by Mr. Rogers, Medical Superintendent at Trincomallie; but, as in former cases, it failed of success in all, except in John Sybelle, a half-cast boy of twelve years of age, in whom it very fortunately took effect. On the 20th of August, being the ninth day from inoculation, a distinct pustule was formed on the inoculated part, bearing the characteristic marks of the Cow-pox, and attended with pain in the axilla, and slight fever, so that Mr. Gilbert Hall, Surgeon of the Malay Corps, who, in consequence of the absence of Mr. Rogers, had charge of the patient, had no hesitation in pronouncing it to be the true Vaccine disease. He immediately inoculated thirteen patients from the arm of this boy, in all of whom he informs me the inoculation had evidently taken effect on the 26th of August. The most effectual measures have been ordered by this government, for keeping the contagion, and extending it as expeditiously as possible to the different

stations on this island, and the Coromandel Coast, by means of inoculated patients. The fortunate event of John Sybelle's inoculation with matter thirty-two days old, should teach us not to despair of success with dried matter, which has even been kept a considerable time in a hot climate; but the very frequent failures with dried matter, both in Europe and India, shew that it is at best but a very uncertain means of conveying the contagion to any considerable distance. I beg leave to congratulate the gentlemen of the Bombay Medical Board, on the success of their endeavours in the cause of humanity, and to return them my thanks for the benefits they have conferred on this settlement, by introducing the Vaccine disease into India, and extending it to Ceylon.

I remain, &c.

Columbo,
September 1, 1802.

T. CHRISTIE.

To His Excellency the Honourable FREDERIC NORTH,
Governor of Ceylon, &c. &c. &c.

SIR,

THE Vaccine disease, that safe and certain antidote against the Small-pox, being at length successfully introduced into Ceylon, I consider the Small-pox Hospitals as now unnecessary, and therefore beg leave to recommend to your Excellency, that the further admission of patients into these hospitals be prohibited; and that as soon as the cases at present under treatment are terminated, the hospitals be shut up, and the establishments suppressed.

The Cow-pox is a disease of so mild and innocent a nature as not to require any particular confinement or treatment; but as it is of the utmost importance that the virus should be kept up in an uncontaminated state, and that the Vaccine disease should be propagated throughout the island with as much certainty and expedition as possible, I think the present establishment of Medical Superintendents and Overseers may, with great advantage, be employed for this purpose, as well as for affording medical aid to the natives in case of accidents or epidemics, superintending quarantines, and watching over and reporting every circumstance connected with the health of the people

The care of keeping up the Vaccine contagion, ought, I think to be particularly entrusted to the medical superintendents

intendents at each station, who will see that all the overseers in their districts are well instructed in the practice of Vaccine Inoculation, and that they are actively employed in disseminating this most beneficial practice.

The Medical Overseers at present receive ninety rix-dollars when employed in actual service in an infected village; and I would recommend that the same allowance should be continued to them when actually employed in propagating the Vaccine disease in any village at ten miles distance from their usual residence: probably two months in the year would be sufficient for inoculating all the children in the more remote parts of the country, when the different overseers might make the circuits of all the villages in their districts, during which period they would be allowed to draw ninety rix-dollars per mensem; and at all other times they would receive the regular salary of thirty rix-dollars monthly.

Should these proposals meet your Excellency's approbation, I shall immediately write to the different Medical Superintendents, informing them of your Excellency's commands, and at the same time forward their instructions with respect to reports of their practice, &c. &c.

I have the honour to be, &c.

Columbo,
Sept. 4, 1802.

THOMAS CHRISTIE,
Medical Superintendent General.

To the Editor of the Ceylon Government Gazette.

SIR,

FINDING that the experiment of inoculating with Small-pox matter, patients who have passed through the Cow-pox, has not yet been practised in other parts of India, I request you will state in your next Gazette, that the power of the Vacine disease in preventing the Small-pox has been put to this last test at Jaffnapatnam, where two patients, who had passed through the Cow-pox, were inoculated by Mr. Carnie with Small-pox virus, without any effect being produced.

The patients alluded to, were the children of lieutenant Theil, an intelligent Dutch officer, who with a zeal for truth, and anxiety for the safety of his offspring, highly commendable, desired that they might be submitted to the

experiment,

experiment, in order that he might be perfectly satisfied that his children were completely secured against the effects of the Small-pox, and that the Vaccine disease had lost nothing of its specific qualities in passing through such a variety of persons and climates.

I beg leave to mention this as an example worthy of imitation, and to state that all the medical gentlemen on this island are ready to make the same conclusive experiment on any patients who have passed through the Cow-pox, being perfectly satisfied as to its safety.

I have the honour to be, &c.

T. CHRISTIE,
Medical Superintendent General.

Columbo,
Oct. 10, 1803.

A Copy of a Letter from his Excellency the Lord Lieutenant of Ireland to JOHN JULIUS ANGERSTEIN, *Esq. Chairman of the Committee of the Royal Jennerian Society for the* EXTERMINATION *of the* SMALL POX.

SIR,

BEFORE I received the letter of the 29th ult. which you signed as Chairman of the Committee of the Jennerian Society for the Extermination of the Small-pox, I had endeavoured to obtain some information upon the measures which had been adopted, for extending the benefits of your Institution to Ireland; and particularly to ascertain, in what mode the assistance of Government could be best applied towards promoting an object, which is upon every account so interesting to the public.

I understand from the Medical Gentlemen of Dublin, whom I have consulted on the subject, that it is very important to ascertain the best mode of obtaining and preserving the genuine Vaccine matter: I have therefore directed a letter to be written upon the subject to the President of the College of Physicians, of which a copy is enclosed; and shall be glad to receive any information and assistance which you may think it useful to communicate.

I shall be extremely happy to accept the office of Vice-President of the Jennerian Society; and beg leave to return you my acknowledgements, for the manner in which you have been so good as to propose it.

I remain, &c.

HARDWICKE.

Dublin Castle, Feb. 18. 1803.

May it please your Excellency,

THE Medical Council of the Royal Jennerian Society for the Extermination of the Small-pox, have directed us to answer the letter, which your Excellency did Mr. Angerstein the honour to address to him as Chairman of the Committee of the Society, relative to the best mode of obtaining and preserving the genuine Vaccine matter.

This office we cheerfully undertake; sensible of the advantage which must accrue to the public, when Vaccine Inoculation is practised under such auspices, and when the assistance of Government is applied to the promotion of that object.

When fluid matter can be procured, it is always to be prefered; especially when the Small-pox prevails in any district where Vaccine Inoculation is to be introduced. Some persons who are to be inoculated may be conveyed to the place where a Vaccine patient resides, and the fluid may be transfered immediately from arm to arm; or a person who has the Vaccine affection may be conveyed to any place where the practice is to be introduced; and a considerable number may daily be inoculated from that single source.

But when it is impracticable to obtain fluid matter, there are various modes of transmitting it in a dry state. When it is to be used within two or three days, a lancet is a proper vehicle; but if it is not used within some such period, the lancet rusts, the matter becomes decomposed, and a spurious pustule is likely to be the consequence. This has been one of the most common causes of the numerous errors committed in Vaccine Inoculation. The Vaccine fluid is much more aqueous than the Variolous; and cannot, like the latter, be preserved on a lancet for any length of time without injury.

Many safe and effectual methods of preserving Cowpock matter have been devised, and extensively practised. Some of the most common are, the taking of it on thread or glass, and suffering it to dry; then the thread or glass is to be charged again. This may be repeated several times. These methods are entitled to some degree of approbation; but they are attended with a great consumption of matter, which is important in an affection where that article is so sparingly produced.

Another objection to glass is, that many practitioners fail to infect their patients with virús thus preserved; ei-

ther in consequence of diluting it too much, or not allowing it sufficient time to dissolve.

To remedy these inconveniences, other modes have been invented. Lancets have been made of gold, silver, platina, and ivory; which, when armed, have been employed for the transportation of Vaccine virus with advantage.

Another mode, which seems well calculated for general use, is to take the fluid on a quill, shaped like a tooth-pick, and suffer it to dry. At the time of inoculation, a puncture is first to be made with a lancet; then the point of the quill is to be inserted, and held in the part half a minute or more. Afterwards, the flat surfaces of the instrument may be repeatedly wiped on the place, in order to lodge as much matter as possible in the puncture.

To render this instrument the more portable, it may be made out of a slender portion of a quill, pointed at the end. This may be conveyed in a letter, or several of them may be enclosed within the barrel of another quill, stopped with white wax; sealing wax is unfit for the purpose; the heat necessary for melting it may decompose the matter.

Another method is, to take the matter on a small bit of ivory, shaped like the tooth of a comb, and pointed at the end like a lancet. This may be called a Vaccinator. It is well adapted to the purpose, since it easily penetrates the puncture made by a lancet; and is very portable, either in a common quill, or a crow quill, or wrapped in paper.

Would every practitioner take matter on these instruments, when he has a patient under Vaccine Inoculation, it would furnish him with a constant resource in case of necessity, both for himself and others.

Vaccine virus ought not to be taken after the areola begins to be extensive, nor to be dried before the fire, nor in any other way to be exposed to much heat.

We have enclosed some Vaccinators charged with matter, as a specimen of the method before recommended, and as a present supply.

We are preparing Medical Instructions for the new Society, which, we flattered ourselves, we should have been able to transmit; but the meetings of the Society have been so frequent, that we have had little time to devote to this purpose. When they are completed, they will be added to the laws of the Society, and shall be transmitted to your Excellency without delay.

We have the honour to be, &c.

EDWARD JENNER,

London, March 21, 1803. JOHN RING.

A TABLE shewing the Advantages of VACCINE INOCULATION. By JOHN RING.

THE NATURAL SMALL-POX.	THE INOCULATED SMALL-POX.	THE INOCULATED COW-POCK.
I. The natural Small-pox is a loathsome, infectious, painful, and fatal disease. It is confined to no climate; but rages in every quarter of the world, and destroys a tenth part of mankind.	I. The inoculated Small-pox also is loathsome, infectious, painful, and sometimes fatal; and, when partially adopted, spreads the contagion, and increases the mortality of the disease.	I. The inoculated Cow-pock scarcely deserves the name of a disease. It is not infectious; and, in the opinion of the most experienced practitioners, has never proved fatal.
II. Those who survive the ravages of that dreadful distemper, often survive only to be the victims of other maladies; or to drag out a miserable existence worse than death.	II. It sometimes occasions the same maladies as the natural Small-pox.	II. It occasions no other disease. On the contrary, it has often been known to improve health; and to remedy those diseases under which the patient before laboured.
III. This cruel and lamentable disorder leaves behind it pits, scars, and other blemishes; and bodily deformities which embitter life.	III. It frequently leaves behind it the same blemishes and deformities as the natural Small-pox; which are the more deplorable as they were brought on by a voluntary act.	III. It leaves behind no blemish, but a *blessing*;—one of the greatest ever bestowed on man,—*a perfect security against the future infection of the Small-pox.*

From this faithful statement of the advantages attending VACCINE INOCULATION, it must appear evident to every unprejudiced person, that it is the duty as well as the interest of every parent, of every individual, and of every nation, to adopt the practice; and to hasten the EXTERMINATION of the SMALL-POX.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

HAVING lately met with a striking instance of Cow-Pox Inoculation superseding the Small-pox contagion, induces me to avail myself of the first opportunity of communicating it to you, in order that it may be inserted in your valuable monthly publication, if worthy of notice. How far the previous exposure to Small-pox effluvia might have tended to retard the usual progress of the Vaccine disease, in the subsequent case, I will not venture to decide; but surely it affords an excellent proof of the propriety of urging Vaccination to the greatest extent, and not despairing, on similar occasions, to arrest the progress of that dreadful distemper the Small-pox.

John Vice, æt. 14, having been ill four or five days with pain in his head, sickness, and violent pain in his bones, was found partially covered with an eruption on Friday morning, March 18, which was not suspected to be variolous till the following Monday. Being desired to visit him for the first time on this day, I could not hesitate immediately pronouncing him to be labouring under Small-pox, and earnestly recommended his brother to undergo the process of vaccination as speedily as possible, to avoid the contagion. As these boys had been hitherto pretty constantly together, and sleeping in the same bed, there appeared to me no very great prospect of success, and none to the mother, who for some time objected to my proposal: but as the number of children in our neighbourhood not having had the Small-pox was considerable, I thought it a duty incumbent upon me to *endeavour* to cut off this raging disorder in its infant state. Permission being granted, I accordingly inoculated George Vice, æt. 11, on the following Tuesday morning, March 22, with fresh Vaccine virus, and having separated them the preceding day, desired that no further communication should be had between them. On Sunday 27, very little appearance of inflammation on the inoculated part, and scarcely sufficient to believe it had succeeded. On Wednesday 30, the arm still appeared slightly inflamed; but, on Friday, April 1, it began to advance a little. On Saturday and Sunday its advancement was accompanied with the true characteristic symptoms of constitutional affection, and he felt

felt exceedingly ill. Monday, April 4, the arm continued considerably inflamed, but the grievous symptoms mitigated, he was able to walk about a little, and began to appear as lively and brisk as usual; and a few days after the dark incrustation formed over the inoculated part, the inflammatory process subsided, and the boy appeared quite well.

I am, &c.

Maningtree, April 30, 1803. G. ROGERS.

A CASE *of* ELEPHANTIASIS; *communicated by Mr.* WARD, *of* MANCHESTER.

THE success which attended the treatment of the following case leads me to suppose some benefit may result from its publication: I was reminded of it by a case somewhat similar, but of much longer standing, which fell under the care of Dr. Henning, of Zerbst. See vol. 9, p. 289.

Robert Walker, a native of Ireland, æt. 26, was admitted into the Infirmary, May 13, 1801, with a large tumour on the left leg, and a considerable, but more diffused swelling of the right. His account of the origin and progress of the disease was as follows.

Nine years ago he began to perceive an itching and cracking of the skin, accompanied by a watery discharge and swelling about the inner ancle of the left leg. The enlargement increasing, he became a patient in the hospital at Armagh, and afterwards in that at Tyrrol; and since his discharge, had been under the care of several eminent surgeons, but obtained no relief. He then came to England, and procured a recommendation to the Liverpool Infirmary; but not being taken in, he came to this place. Three years ago the disease began to shew itself in the right leg, attacking the same part, and commencing with the same symptoms as in the left, but the enlargement was trifling comparatively. About the same time he was attacked with rigors, pain in the head and back, *maziness*, and an irresistible propensity to sleep, which continued two or three days, and returned once a month or six weeks. He had had the itch two years before the first appearance of the complaint, which he thought had

not been properly treated, and which was the only probable cause he could assign.

The enormous size of the principal tumour, and a wish to examine it at my leisure, induced me to admit him, for I had no expectation of his receiving any benefit. It was moveable, firm, and elastic, and occupied nearly the whole of the space between the knee and ancle joints, commencing about an inch above the latter, where it measured 30 inches in circumference, and terminating about an inch and an half or two inches below the former, where I imagine it must have measured about 20. So abrupt was its termination, particularly at its lower part, and so equally was the limb surrounded by it, as to render its form not unlike that of a churn*. The skin, as far as the disease extended, had all the characteristic marks of Elephantiasis†: the sensibility was impaired; the joints of the toes were larger and the foot broader than natural: the man's face was not deformed, nor was his voice hoarse. His expression, however, was so rapid as to be often unintelligible; but this defect had subsisted, in a less degree, a long time. The right leg was not half so much enlarged as the left; in other respects the appearances were nearly the same. It is remarkable that he had walked nine miles the morning of his admission, without experiencing any inconvenience except what arose from the weight of these appendages.

An operation, all circumstances considered, did not seem advisable; I therefore resolved on trying the effect of pressure; the best mode of applying which appeared to be that adopted by Mr. Baynton, in the cure of ulcers.

The tumefied parts were well washed and rubbed with tepid water and soap two or three times a week, and every morning long narrow strips of adhesive plaster were applied tight, and a proper bandage over all. By this mode of treatment they were speedily and considerably reduced; and by persevering in it about five months, (when he was discharged for irregularity) both limbs were nearly restored to their natural shape and size.

During his stay in the house he was attacked pretty regularly once a month with nausea and pain of the stomach,

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* I regret that it did not occur to me to have a drawing made from it till it was too late; but a tolerable correct idea may be formed from the above description.

† Cul. Nos. Med. V. ii. Cl. 3. O. 3. G. 87.

stomach, which gave way to an emetic, followed by a dose of rhubarb and calomel, and a tonic medicine.

Five months after his discharge, I received a letter from him, stating, that his limbs were in the same state as when he left the infirmary, and declaring his conviction that he should be as sound a man as any in Ireland, might he be permitted to come in again for another month.

Manchester, May 12.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN consequence of Dr. Kinglake's pressing invitation to medical men to communicate their experience in the use of cold applications in the cure of Gout and Rheumatism, Mr. Scott and Mr. Taynton, surgeons at Bromley, in Kent, cannot any longer defer making known, through the medium of your excellent publication, the result of their own practice in these disorders. Amongst several cases that have fallen under their care, they think the four following the most deserving of notice.

CASE I. On the 24th of February, 1803, they were sent for to a young married woman who had been ill three days. She was unable to stir hand or foot; her pulse was quick and hard; she had great thirst, and complained of severe pain in her feet and ancles, attended with swelling and inflammation; the wrists and elbows were also affected. Cloths wetted in a solution of muriated ammonia, were ordered to be constantly applied to the parts; and one grain of opium was given her at night. On the 25th they were agreeably surprized to find the swelling and inflammation nearly gone, and the pain much abated. On the 26th she was able to walk down stairs, and by the beginning of March was cured.

CASE II. On the 14th of April they visited a young man labouring under acute Rheumatism. The febrile symptoms were pretty severe; he was unable to walk; felt great pain in the ancles and knees, and in one elbow. As he was costive, he was ordered to take an opening medicine, and to apply constantly the cold solution. He soon experienced

experienced ease; and though the pains shifted from one joint to another, and the weakness did not leave him so soon as in the former case, he was able to move about with the assistance of crutches in three days, and by the 28th was well.

CASE III. A gentleman's butler was attacked by Gout in the great toe of his left foot on the 11th of April in the morning. He had repeated exacerbations and remissions of pain till the 14th, when they saw him: they found the toe greatly inflamed, the skin shining, the parts exquisitely tender, and the patient not able to set his foot to the ground. It was wrapped up in flannel, which was immediately removed, and in its stead it was surrounded with wet cloths dipped in the cold solution, and an opening draught was given him. He found relief in half an hour, and on the following day could set his foot on the ground. On the 20th he was quite well.

CASE IV. A lady, upwards of sixty, habitually subject to Asthma and tedious fits of the Gout, whilst labouring under severe dyspnœa and cough, attended with pyrexia, was attacked with pain and inflammation in the instep and joint of the great toe. The parts were of *course* immediately envelloped by her attendants in a quantity of flannel, with a view, *no doubt*, of enticing all her other *complaints on this one spot*. The cough was treated as if she had had no gout; and the gout as if she had had no cough. The cold application was of great use; no unpleasant symptom occurred, and she was soon cured.

Mr. Scott and Mr. Taynton take this opportunity of returning their acknowledgments to Dr. Kinglake, for his valuable communication on this subject. They have every reason to think that his plan of treatment will prove highly beneficial to mankind; and, as they are in very extensive practice, they will neglect no opportunity of giving it a fair trial, and of making known the result of their failure as well as of their success.

Bromley, Kent, May 12, 1803.

To

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I Conceive it might be admitted as an axiom in philosophy, that knowledge, unless it be scientific and founded upon principles, ought to be considered as a suspicious light which may mislead. It may be said of ———,

> No system guides th' unscientific man,
> All is a chaos or a random plan.

Science, I believe, is defined a particular kind or branch of knowledge, wrought by theory and demonstration to clear, deducible, and self-evident principles. We traverse the regions of knowledge, we walk in the paths of science. These metaphors I consider to be descriptive of the sense, and, like all good metaphors, the meaning is not difficult to discover: one implies a wandering, vague, and without controul; the other a definitive and circumscribed action. The promulgation of experience is therefore of great importance to the cause of science; since it is chiefly from the combination of facts, that science was and can be formed. Your Medical Journal appears to me to possess this genuine principle of philosophy. Its fundamental tenets are, a detail of medical facts, faithfully composed from the unquestionable experience of divers medical practitioners. The case I have to offer you is sterling; it is of my own person.

Nearly two years ago, after a day of great fatigue, I had occasion to walk, *au soir*, over a considerable extent of pasturage land, the grass of which was wet. I had not proceeded far before I began to feel uneasiness in my right ancle and foot, which before the end of my ambulation became so very painful, that I was unable to walk without frequent haltings. I obtained no remedy from rest, for the next day the complaint appeared to be aggravated. The foot was swoln and turned awry, bending inwardly; this deformity was so great, that a medical acquaintance affirmed there must be a luxation of bone. I knew however the complaint was only muscular. The ancle and foot were coloured with a rheumatic redness. In a few weeks erratic rheumatism afflicted every joint of my body. I had sometimes lumbago, at other times rheumatism in my shoulders, so badly that it was with difficulty I could put on my coat; in my wrist, that I could not supinate my hand; in my knuckles, that I could not pare an apple. In truth, for upwards of a year I was lame and decrepit.

— To

—To be plain, my infirmities began at last to acquire me the odious appellation, of "The lame Doctor." You may justly suppose I was very solicitious to get rid of my vexatious companion, Rheumatism. I used most of the medicines commonly prescribed for that disease, and also electricitry. As for electricity, I should have been equally benefited had I merely rotated the electrical wheel. It is worth remarking, that soon after the accession of rheumatism, I removed to another part of the globe. I dwelled four months within the tropic of Cancer; yet a hot climate, and all the medicines I had taken, did not procure me a remission of the disease. Returning to England in May last, I determined to try the effect of immersions into cold spring water. I continued indefatigably the use of the immersions for nearly four months. I constantly bathed once, frequently twice, and sometimes three times a day. At each immersion I usually swam about in the water for a few minutes. For the first month the bathing seemed to have no other effect upon me than a remission of rheumatism while I was in the water. In the course of the second month I was more encouraged to proceed in my cold plan. At last I relinquished the bathing, because it was unnecessary to seek further for what I had already found, *a perfect recovery*. It may be proper to observe, that during the bathing I adopted the use of fleecy hosiery stockings, which I believe materially assisted in the completion of the cure. I shall be cautious of betraying the Sciolist, shall assume no principle, offer no inference, nor involve confidence with this case, which in my experience is a solitary fact. The case was such as I have here related. If you think it will add to the stock of useful information, you are welcome to print this letter. If you see any errors in my letter, by all means correct them. I am apt to think, had such an injunction been given you by *some* of your authors, we should not see the Medical Journal so disfavoured as it is *sometimes* in point of style and language. I say nothing of the refinement of letters, of sublimity in writing, and the like, because among the gay flowers of rhetoric, an aukward metaphor and an ill chosen simile, are not unfrequently the weeds of the best cultivated soil.

I am, &c.

April 8, 1802. S. G.

To

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I Am acquainted with no means by which Medical Communications are so generally diffused as through the medium of your truly valuable Miscellany; and from the very great attention you bestow upon such information as is likely to throw any light upon the science of medicine or physics, I beg leave, in case it merits your approbation, to lay before your readers, an easy and successful method of injecting the auditory organ with metal, in order to exhibit its beautiful and intricate structure, as very few individuals in this metropolis, I believe, have been successful in their attempts of this kind. The method I adopt is as follows:—The temporal bone, if not perfectly dry, is to be exposed for some time to a degree of heat so gentle as not in the least to burn it or injure its structure, until its moisture is perfectly dissipated: the squammous portion may be broken off, taking care not to injure that part of it which forms the meatus externus, and every part of the bone except the external auditory opening is to be surrounded with Paris plaster, mixed with no more water than is just sufficient to reduce it to a paste. As soon as this coating, which should be about half or three quarters of an inch in thickness, has become perfectly set, it is at first to be exposed to a very gentle and afterwards to a clear red heat, and to remain in this state until a dense smoke ceases to issue from the external meatus, which is a criterion by which I judge of the bone being sufficiently calcinated; but this point, which is of no small importance, can only be determined by practice. The metal ought now to be melted, which should be composed of eight parts of bismuth, five of lead, and three of tin, or what is still more fusible, equal parts of zinc, bismuth, and lead, and poured while the bone is almost red hot, into the opening which has been purposely left uncovered. This metal, from its very great fusibility, retains its fluidity for a sufficient length of time, to enable it to insinuate itself compleatly into the mastoid cells, semicircular canals, and cochlea. The bone, as soon as its contents have become solid, is to be put into water, which causes the plaster of Paris (which appears to have suffered a decomposition by the fire) to fall immediately into pieces; the bone will now

now admit of being detached from the metal by means of a pen knife or any sharp instrument, and if the operation has been carefully conducted, a very beautiful and perfect cast will be obtained. If the above, which is the result of a variety of experiments, proves of any service to those who are zealous in anatomical and physiological research, I shall think myself very amply repaid for the trouble I have bestowed upon the subject.

I am, &c.

ROBERT LOW,

Member of the Royal College of Surgeons, London.

Tavistock Row, Covent Garden, May 2, 1803.

CASE *of* CONTRACTED ŒSOPHAGUS; *communicated by* MR. SMITH, *Jun. of Limehouse.*

ON the 14th of April last, I was desired to visit Mrs. Elizabeth Brown of this neighbourhood, who laboured under what appeared to be a contraction of the œsophagus; she could swallow no solid food, and was also much affected with dyspnœa, particularly on attempting to lie down, being, when in bed, obliged to have the trunk elevated to nearly an upright position by means of pillows. On enquiry, I found she had felt a little impediment to swallowing near a twelvemonth back, and in January last was attacked by a severe catarrhal affection, but did not find the difficulty of swallowing increase till about seven weeks ago, when it became much worse, and the difficulty of breathing also was at times very great, occasioning much distress and alarm to the patient and her friends; she feeling a lump, to use her own expression, in her throat, which obstructed her swallowing, and appeared as if it would strangle her. I desired her to take some liquid in my presence; which she did, but could swallow very little at a time, and with a peculiar kind of noise, not unlike a person in the act of gargling the throat. I conjectured there must be a contraction of the œsophagus, and that there must be some tumour which pressed upon the trachea and occasioned the difficulty of respiration, particularly as the throat appeared rather swelled, just below the cricoid cartilage. I had a blister applied round the throat, and one to the upper part of the sternum, and gave her a grain of calomel night and morning, which she took in a little gruel.

gruel. The blisters were kept open by the ung. Sabinæ, and discharged greatly. Two days after she thought herself relieved, and swallowed a small piece of cake soaked in tea, or milk and water, but on the following day the symptoms were more severe than ever. I wished to introduce a bougie into the œsophagus, to endeavour to dilate the stricture, but could not prevail on her to consent. She continued in this state, often expressing an inclination for solid food, but unable to take it, till Friday the 22d at night, when the difficulty of breathing became more violent, and, on Sunday, the 24th, about noon, excessive, when she expired, apparently suffocated. Her throat appeared rather more swelled a day or two before her death, but in a few hours after it wholly subsided. Permission being obtained to open the body, the following were the appearances which presented: The stomach was much contracted, and the rugæ on its internal surface very large and numerous, which is to be attributed to the small quantity and nature of the aliment received into it for some time past. The liver appeared to have been at some former period slightly inflamed, as broad, irregular patches of a buffy appearance were found on its surface, not however extending far into its substance, which on cutting into it presented a healthy appearance. There was a slight adhesion of the right lung to the pleura. On cutting into the trachea, a considerable quantity of pus issued out, which had made its way into it at its upper and back part, where it is not cartilaginous, at which part it rather projected in the form of a small tumour, with an apex a quarter of an inch long, which was found to communicate with the œsophagus. The parietes of this latter were very much thickened at this part, and the passage was, for the length of three inches, so contracted as to be impervious to a crow quill. It also contained a quantity of matter not unlike to curdled milk. The inferior part of the œsophagus was not altered in its structure, and all the other viscera were perfectly sound. The pus found in the trachea had flowed through the aperture above mentioned. It plainly appears, the death of the patient was caused by the bursting of this abscess into the trachea, and all the preceding symptoms of dyspnœa by the pressure of the tumour at that part. The subsiding of the tumour about or rather after the time of her death, is accounted for by the evacuation of the pus into the trachea. The appearance of the pus was very similar to that found in scrofulous abscesses.

Inflammation might perhaps at first take place in that part of the œsophagus next to the trachea, which might extend to the membranous part of the trachea itself, and lay the foundation for this distressing disease, which for several months appeared to make no progress, and was slight in its symptoms, when it suddenly became very much aggravated, and at length put a period to the life of the patient.

ANALYSIS *of an important* WORK, *published a few Years since in* DENMARK, *and hitherto unknown in* ENGLAND, *on the* LEPROSY *of the* WEST *in the* MIDDLE AGES, *with a* SUPPLEMENT *relating to the* HISTORY *and* KNOWLEDGE *of the* DISEASE; *by* PHIL. GAB. HENSLER, *First Physician to the King of Denmark, and Professor of Physic at Kiel. Communicated to the Editors.*

THIS work will be a durable monument of the industry, judgment, and erudition of its author. No one can properly appreciate the great difficulties Prof. H. had to encounter in his undertaking, who has not experienced the obscurity in which the medical history of the middle ages is involved, and what profound skill in the barbarous language of those times is required to obtain a thorough knowledge of a disease, but few traces of which remain. A writer, who would seem to have studied nature, not books; who, amply furnished with literary treasures, has reaped an abundant harvest from extensive reading; and who, at the same time, possesses great acuteness of intellect with profound judgment, has overcome all these difficulties in such a manner, that the voice of the public cannot fail to bestow on his labours the loudest applause. It is not enough to say, that this work, which contains a complete history of the Leprosy, is so perfect in every respect, as far to excel every thing before written on the subject; but it appears to us as the best introduction to the history of our art, such as it was in the middle ages. In his history of the Lues Venerea, our author showed his opinion of the manner in which a history of the art of physic should be written; and had the writers of the present day pursued the path he there pointed out, the art would unquestionably have derived great benefit from their labours. This mode he has followed in his history

history of the Leprosy, adverting to those circumstances that relate to the general history of the art. These, however, he touches briefly, and without going out of his way, making them accessaries only, not his principal objects; but they appear of the more moment, as they are eminently the fruits of judicious study.

The professor candidly owns, that his researches into the history of Syphilis, which he compiled a few years ago, afforded him considerable information respecting the Leprosy; for in the middle ages the theory of this disease was much more elaborate, and the rude physicians of those days were more diligent in fashioning their hypotheses into systems, to guide them in this unknown land. The humoral pathology too opened their eyes to the observation of some external varieties of this disease.

In the first chapter the author investigates the traces of the Leprosy to be found in writers both of the east and west. From the east, from Phœnicia and Egypt, where the disease is endemial, he proceeds to the west. As early as the ninth century, hospitals for lepers were every where to be found. The Arabian writers, who describe the leprosy, are briefly enumerated. Johannes Serapion and Janus Damascenus are the same person. The writings of Rhazes display little learning. (The learned author does not read Elchani.) No one of the Arabians is superior to Haly Abbas. (We think Rhazes.) Ebn Sina wrote as a philosopher. (We cannot judge properly of the doctrines and writings of the Arabians, till we have been made acquainted with their schools by physicians skilled in the Arabic language.) Constantine Africanus was the author of the system, to which subsequent writers adapted the theory of four species of leprosy. (Was not the whole of this theory invented by Ebn Sina, or borrowed with a little alteration from the Greeks themselves, from Paulus and Ætius, and adopted all by the Arabians?) Roge and Roland approved castration as the grand remedy. (A passage in Aretæus misunderstood, where he says, that the genitals have fallen off without injury in elephantiasis, gave rise to this error, which we know was afterward applied to the cure of the lues venera itself.) Theodoric was not a bishop, but a medical practitioner in Catalonia: he first gave a better description of this horrible disease than his predecessors. Lanfranc's, however, is deemed still preferable. Gilbert, of England, who was already acquainted with the spiritus Mindereri, is commended by our author.

 It

It seems altogether astonishing, that Theodoric of Spain, Gordonius of France, Salicetus of Italy, and Gilbert of England, should have given perfectly accordant histories of this multiform disease nearly in the same age. We cannot admit in its full extent the two periods established by our author in the barbarous ages of latinity, though they have some appearance of truth. That the Emperor Frederic II. was the first who promoted the study of the Greek physcians, and that the number of those who blindly followed the Arabians in consequence diminished, we do not deny; but we cannot grant, that the monocracy of the ancient Arabians was destroyed by his endeavours. There is unquestionably a striking difference between the barbarous Latin writers of the fourteenth century and those of the twelfth. It seems, however, wholly referrible to the reading of the latter physicians, which was assisted by better translations made directly from the Greek. But the Greeks were read before the time of Frederic II. though in translations executed by Arabians. Haller is by no means to be credited, when he says, that barbarous latinity reached its acme at the beginning of the fifteenth century. The history of the leprosy is brought down to Paracelsus and John Gersdorf.

A more recent case of a true elephantiasis, that followed a veneral infection, is added.

In the ſecond chapter the leproſy is deſcribed, ſuch as it appeared in the weſt during the middle ages. We cannot admit with our author, that the hypotheſis of four primary humours, on which the theory of all diſeaſes reſted above a thouſand years, was already eſtabliſhed in the writings of Hippocrates. Whence indeed could Hippocrates have derived this theory? The philoſophy of Heraclitus, which he followed, contained nothing like it: nay, the humoral pathology would have contradicted the reſt of the fragments of the theory of Hippocrates, περι ενορμωντος, περι εμφυτȣ θερμȣ, &c. This theory might be much more clearly derived from the philoſophical writings of Plato, to which it is clear the earlier followers of Hippocrates adhered. Thus the humoral pathology entered into the ὑποϐολιμαια of Hippocrates. Praxagoras of Cos was the firſt, as far as we know, who brought forward this doctrine in its full extent.

Our author excellently delineates the nature of this Proteus malady, which ought rather to be conſidered as an univerſal diſeaſe than a particular ſpecies. In the weſt the following evident concomitants of this diſeaſe were obſerved.

Morphea

Morphea alba, the firſt ſpecies of *vitiligo,* the ἀλφος* of the antient Greeks, *al wazehh* † of the Arabians, the *bohak* ‡ of Moſes, was a ſpot of a milky whiteneſs, (this the Arabic word likewiſe indicates, as it alſo ſignifies milk,) inſenſible, and without any change of the ſkin beneath. In conſequence of this inſenſibility acupuncture was employed, to diſtinguiſh a harmleſs ſpot from the leprous. But if it aſſumed the form of lentils, it was called by the Greeks φακος, φακιος; by the Romans *lentigo;* (by the Arabs *baraſch* ‖). If the author believes that the *ſeeth* of Moſes ſignifies this *lentigo,* he is greatly miſtaken.

Morphea nigra, of a brown colour, was another ſign preceding the confirmed diſeaſe, approaching more to the *impetigines. Vitiligo* μελας of Celſus; αλφος μελας of Paulus; the εφελις of ſome of the antient writers. (*Al khalaf* of the Arabians. The root كلف, inclining to black. *Al guaſem,* or rather *al waſchem,* was a very different ſymptom of the leproſy, though our author claſſes it here.) It irritates the ſkin, vehemently excites itching, and a deſquamation of the epidermis follows.

Impetigines & ſerpigines variæ precede the proper eruption of the leproſy. They are called *impetigines,* if they remain in the ſame place; *ſerpigines,* if they ſpread from one place to another. To theſe are to be referred the λειχηνες αγριαι, ψωραι, λεπραι, κνησμοι, of the antient Greeks; the *papulæ feræ, pruritus, pruriginoſæ papulæ, porrigines,* &c. of the Romans; the בֶּהָרֶת of Moſes; the *waſchem* of the Arabs, (called *al guaſem* by Henſler; *geſſone* by Salicetus,) from the root وشم, *ſtigmatibus pinxit cutem,* which the iſlanders of the Pacific Ocean call tattooing.

Though theſe *impetigines* have a red colour, they were antiently called φακωδες ὑπερυθρον, *ſemion* by Celſus; *miſpach* by Moſes, from the ſame root as the *ſafathah* of the Arabians, (سفح, *effudit,* as if the redneſs were poured out), by whom it was alſo called *dem almit* (dead blood), *gutta roſacea, aura ceruina,* (from *auerum,* a beaſt of burden, and *ceruina,* a wine cellar,) as if it were an animal employed in carrying red wine. It

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* From ἀλφαινειν, mutari.

† Not al guada, as our author writes it. The root is وضح ſplenduit, as if it were a ſhining mark.

‡ From the Syric root ܒܗܩ, fulſit, ſplenduit.

‖ The author is miſtaken in his opinion, that this diſeaſe was called puſtules by the Arabs. Baraſch (Ebn Sina, lib. iv, fen. vii, tr. 3, c. 6.) ſignifies a ſpot in the ſhape of a lentil. The root is uſed of particoloured horſes, ſuch as we call dapple-grey. Baraſch (برش) muſt not be confounded with baras (برص), of which notice will be taken further on.

It was alſo called *buzicagua* (from *buza*, a wine-veſſel, and *cahua*, wine of Cahors). Perhaps this was the *mal de roſa* of Aſturia.

If the impetigines were of a brown colour, they were called αλφοι μελανες by the Greeks; *ſaphachath* by Moſes; *bohak al aſud* by the Arabians, and came nearer to the *morphea nigra* mentioned above. Another diſeaſe follows as a precurſor of leproſy, which puts on various appearances, and comes under the names of *furfures, alopecia, ophiaſis*. *Furfures*, επαναςασιες συκωδεες, ογκοι συκωδεες, πιτυριασεις, *tinea capitis*, with moiſt ulcerations, were frequently harmleſs. (Levit. xiii, 6, Moſes declares that הַמִּסְפַּחַת is innoxious. So does Ebn Sina, lib. vi, fen. vii, tr. i, c. 24. Hhaſis ſays, that حزيز* is not very dangerous.) But if the ulcers penetrate deeply, and if at the ſame time a cancerous ichorous cacochymy be preſent, Moſes pronounces his *mispahhath* leprous. In the middle ages it was called *zerna ulceroſa, derbia*.

The ἑτεροχροια of the hair, attended with thinneſs of it, and falling off, was called *alopecia*. In the books of Moſes we have נֶתֶק†; in Ebn Sina, دا الثعلب *daalts' aleb* (*morbus vulpium*). Moſes properly diſtinguiſhes נֶתֶק (*alopecia*), from גַּבַּחַת (*baldneſs*), which Henſler does not appear to have obſerved. Baldneſs commonly begins on the fore part of the head, *alopecia* on the hind part. Our author juſtly conceives *tyria* to be the ſame with *alopecia*, or rather with *ophiaſis*; for it was a baldneſs attended with falling off of the hair, and eroding ulcerations in the neck. But there was another *tinea*, which was a confirmed leprous affection. (This *tyria*, of which we now ſpeak, Ebn Sina expreſsly calls دا الحية; and he deſcribes it ſo diſtinctly, as to leave no doubt of his meaning by it that harbinger of the leproſy, which later writers call *monile aſturienſe* ‡.—Another ſpecies of alopecia was called the *mentragra* of Pliny: this too, like all the other ſymptoms juſt enumerated, was inclined to degenerate into the leproſy itſelf.

Our author next returns to *maculæ, lentigines*, and *panni*; which however, after briefly conſidering, he rightly refers to the *morpheæ* before mentioned. If he have not perfectly underſtood the writings of the Arabians, here and in other places, it muſt be aſcribed to our verſions, made by Gerardus Cár-

* The root حز, ſcalpſit ſe. † The root נתק, evellere.

‡ *Le collier d'Aſturie*, Thierry. The Aſturians themſelves call it *gargantilla*.

monænſis,

monænſis, Alpagus, and Rinius, which are corrupt, and altogether uſeleſs. Perhaps therefore it may not be amiſs, if we tranſlate from a ſplendid edition in Arabic, publiſhed at Rome in 1593, a paſſage, which our author has quoted in page 70, and from which, miſled by ſome bad verſion, he frames an etymology and deſcription not ſufficiently accurate.

Ebn Sina, Lib. IV, Fen. VII, Tr. 2, c. 6.

'*De ſanguine mortuo, lentigine fuſca, & morphea nigra.*'

'*Namaſch** (ſerpigo rubra, φακιον ὑπερυθρον) and *ſanguis mortuus* take place, when the blood in a diſſolved ſtate dilates the orifices of the veins, ſo that the blood is ſeparated into craſſamentum;† or when the acrimony of the blood produces διαπηδησιν; ſo that, being retained ſome time under the ſurface of the ſkin, it becomes thick and atrabilious. But its (ſuperficial) place is apparent from its figure and colour. If it incline to red, it is called *namaſch (ſerpigo rubra)*; if to brown, *baraſch (lentigo fuſca)*; and a ſpot that is altogether dry, and void of moiſture, is called *khalaf (morphea nigra)*. Some indeed call ſpots in the ſkin *khalaf*. Moſt frequently it happens, that the lips of thoſe who have *namaſch* are chopped, from the too great dryneſs of their temperament.'

If any one will take the trouble to compare this with the other known verſions, he will quickly perceive what numerous and important miſtakes our tranſlators commit. From the paſſage juſt given, what our author ſays of lentigines, in page 75 and following, may be corrected. When he affirms, in p. 76, that the *lentigo rubra* was conſidered as innocuous in the middle ages, though Hippocrates and Celſus declared it to be of a malignant nature; this is to be explained by the difference obſerved between the precurſory ſpots of the late writers, and the red appearances in a more advanced ſtage of the diſeaſe.

Prof H. ingeniouſly explains a difficult paſſage in Hippocrates (Epidem. lib. iii, near the end), where the Coan ſage ſpeaks of thoſe who are attacked by phthiſis when an epidemic prevails. To εἰδος *eorum notabant* το λειον, το ὑπολευκον, το φακωδες ὑπερυθρον, το χαροπον, λευκοφλεγματιαι, πτερυγωδεες, *areæ, maculæ nitentes, lentigines rubræ, oculi pulverulenti, humores frigidi, prominentia humerorum.* The ſenſe of this paſſage appears to be: they whoſe bodies abound with a leprous humour are prone to phthiſis.

* The root is نبش, *punctis variegatis conſperſus fuit.*

† صربة is uſed of the coagulation of milk and of honey.

Our

Our author next proceeds to *puſtulæ*, which in the barbarous Latin are called by the common term of *ſahaphati*. What he ſays of this kind of little ulcers is not ſo eaſy to be explained, ſince the writers of the middle ages appear not to have underſtood their Ebn Sina themſelves. We conceive the *ſa'phah* of Ebn Sina to denote an ulcer of any kind. شير بنج, *ſhir-benadſch*, expreſſes an abſceſs, with a fat baſe, which the tranſlators call a *honeycomb*. باحيه, *babhith*, partakes of the confuſion that generally prevails in theſe words*. If, therefore, the writers of theſe barbarous ages uſed at a venture the words of Ebn Sina, which they did not underſtand, can we deduce any ſolid concluſions from them? Indeed, with reſpect to thoſe writers, our author juſtly aſſerts, that they adapted the various affections of the ſkin to the different diſorders of the humours. It was cuſtomary to aſcribe *morphea alba* to phlegm, *nigra* to melancholy, *lentigo* to choler, *puſtula* and *boſſor ulceroſum* to thick blood. Still the miſtakes we have juſt noticed, and the obſcurity in which the writings of the Arabians are involved, form no excuſe for thoſe who neglect them, and think ſlightly of the merits of others who purſue the laborious ſtudy. We ſhould not forget what Galen ſays: Τολμητεον τε και ζητητεον το αληθες, ει γαρ και μη τυχωμεν αυτȣ παντως· δηπȣ πλησιεστερον, η νυν εσμεν, αφιξομεσθα. We may hope too in this reſpect, πλησιεστερον αφιξεσθαι, η νυν εσμεν.

At length the profeſſor comes to *gutta roſacea*, or a ſpecies of *morphea rubra*, which he excellently deſcribes. Whether the *badeſchanem* of Ebn Sina (in our author, p. 89, *albedſamen*) ſhould be referred to this we cannot ſay†: but it is certain, that the ſame diſeaſe occurs in Paulus and Actuarius under the name of ὑπερυθροι ἐλεφαντες.

Next follows *lepra pſorica*; λεπρα of the Greeks; חָרֶב of Job, from حرش, *ſcalpſit*. But of the Arabs دا لاسود, *morbus leoninus*. The *krimmiſche krankheit* (diſeaſe of the Crimea) of Pallas. In p. 91, the author profeſſes not to know what Rhazes and Ebn Sina mean by their *baraſſem*, which they reckon among *panni* and *lentigines*: if, however, he had

* Perhaps from باح, *raucus*; becauſe exanthema was accompanied with catarrh and hoarſeneſs.

† We do not think it ſhould however; for the Perſians uſe the expreſſion با دشنام, *a ventis oriam ægritudinem*, *flatibus repletam puſtulam*. Perhaps *variola ſiliguoſa*, *alve repleta*.

read

read the Arabian writers themſelves, he would ſoon have perceived, that what is called *baraſſem* in bad tranſlations, was no other than the *baraſch*, or *lentigo variegata*. He rightly obſerves, that Ebn Sina was the firſt who called the fourth *impetigo* of Celſus *baras nigrum*. (For Rhazes and Haly Abbas do not call it *baras*, but *kuba* *: the old Arabians, who tranſlated the Greek Phyſicians into Arabic, always put قوبا, *kuba*, to expreſs λεπρα.) We may here mention, that the paſſage quoted from Ebn Sina, in p. 14, is to be found, lib. iv, fen. vii, tr. 2, c. 9.—This *lepra pſorica* is called likewiſe *zerna* or *malandria*: in Norway it occurs under the names of *ſpedalſkhed* and *radeſyge*. Our author thinks, that this malignant impetigo was of a ſyphilitic nature; but this, we muſt confeſs, appears to us to want demonſtration. We do not know, that buboes were not common to the leproſy as well as to the venereal diſeaſe; but we ſay it with ſubmiſſion to the authority of Dr. H. who is eminently verſed in this matter. This leproſy was contagious; it was called in the middle ages St. Mævius's diſeaſe; and they who were affected by it were compelled to carry on a ſtaff hands made of wool, that any perſon meeting them might be warned to avoid them.

The *lepra alba* however, *baras album* of the Arabians, λευκη of the Greeks, νȣσος φοινικιη of Hippocrates, צָרַעַת † of Moſes, occaſions conſiderable confuſion, ſince neither the Greeks nor Arabians have diſtinctly noted the differences between this and the preceding ſpecies of confirmed leproſy. From *morphea alba* proceeds *lepra alba*, which was extremely prevalent among the jews, but not ſo much in the weſt. The critical effort of nature conſiſts in the expulſion of a thick morbific matter toward the ſurface of the body, which is greatly irritated by it. We cannot wonder, that neither the Arabians nor the barbarous Latin writers have given an accurate deſcription of this diſeaſe and its progreſs; for it is their common fault, to join the definition of a diſeaſe immediately with its treatment, and to pay no attention to its hiſtory.

Our author adds the treatment of the *lepra alba* from Ebn Sina, but in this he commits ſeveral miſtakes from his being unacquainted with the Arabic. The chief of the laxative medicines among the Arabians was حبي النيل, *grana nil*. Prof. H. is miſtaken, when he conſiders this as a paraſitic plant

* The root is قوب, *excorticata fuit cutis.*

† The root صرع, albus fuit.

uſed

ufed in dyeing, or perhaps a *cocculus.* (The *nil* of the Arabians was of two kinds: *grana nil* were faid to be the produce of a creeping plant, with blue bellfhaped trifid flowers. Unqueftionably therefore the feeds of the convolvulus fcammonia Lin.* شجرة النيل, *arbor nil,* of which Ebn Sina fpeaks copioufly, was the indigofera tinctoria Lin., not the ifatis, as Bauhine fuppofes.) The *electuarium anacardii,* which the Prof. enumerates among the laxatives of Avicenna, was chiefly ufed externally, on account of its great acrimony: for both Avicenna and Haly Abbas clearly and in exprefs words recommend this. The *zufera,* which our author fuppofes to have been a fpecies of rue, was nothing more than the ocimum bafilicum Lin†. The Arabians had recourfe likewife to phlebotomy and fcarifications, but only till the fkin was irritated by the eruptions. They injudicioufly dreaded this eruption, which was rather to be defired ‡. Preparations of quickfilver were ufed only externally as cauftics; and not to produce falivation, as in lepra pforica. A great number of cauftics was recommended againft this complaint, among which the oleum tartari per deliquium likewife figured with the weftern writers, however the application of cauteries, or *coctura,* fell wholly into difufe. Mofes was much wifer, who declared, that when the eruption took place the patient was cured. It was the practice of the Arabians and the barbarous ages, to prick the fkin with fharp-pointed inftruments: hence the *cofmetic art,* with which the fick concealed this difgraceful diforder, was always of great importance.

The defcription of the confirmed leprous difeafe, *elephantiafis, leontia, dfchoffam*§ of the Arabians, differs in authors, according to the various appearances the diforder affumed. The hiftory given by Aretæus appears to our author poetical, and, though diffufe, yet very near the truth. Gerfdorf's divifion of the fymptoms into thofe that perceptibly change the appearance of the body, thofe that depend on the efforts of nature, and thofe that relate to the fecretions, appears perfectly rational. That the writers of the middle ages have not left us fo full a hiftory

* Should it not be convolvulus nil, which bears a blue flower, and has trilobate leaves? Tr.

† This plant is faid to have a ftrong fmell, οσφρησις. Perhaps the name *fafar* (for fo it fhould be read) was formed from the Hebrew צפירה, *corona,* for the fame reafon as the Greeks called it βασιλικον.

‡ Abu'l Cafem however recommends the actual cautery as an excellent remedy in *baras album* and *dfchoffam*: de Chirurgia, lib. i, fect. 47, 49, p. 95, 97, ed. Oxon.

§ جذام, the root جذم, digiti ei truncati funt.

of

of the confirmed diſeaſe from its commencement as they might have done, is owing to the ignorance of the people at large, who could not even foreſee that ſpecies of contagion, which was propagated by the intercourſe of the ſexes. Accordingly a deſcription of the leprous fever, which was its uſual beginning, follows. (It appears to us a ſpecies of hectic.) Reddiſh or ſaffron-coloured urine, turbid, with a ſabulous ſediment, was an evident ſymptom. In this period too, gonorrhœa, ulcerations of the penis, condylomata mariſcæ, and hæmorrhoids, ſometimes uſed to appear.

Next follows a hiſtory of the eruption itſelf, particularly of the various deformities, that are wont to occur in the face. This the reader will allow to be very accurate; but to enlarge upon it here would take up too much of our room. At an early period the voice was altered, and grew ſqueaking *(graciliabatur)*: the patient was made to ſing, that the hoarſeneſs might appear. The continual alterations of heat and coldneſs, and habitual chillineſs, obliged the ſick to uſe furs even in ſummer. The examination of the blood deſerves to be noticed: the ſerum being poured off, ſalt was ſprinkled on the craſſamentum, on which it remained unchanged if the patient were leprous, but diſſolved if he were in health. When the diſeaſe was farther advanced, the complexion became brown, and the face was puffed up as in tympany: the hair fell off, and if plucked out ſomething fleſhy adhered to the root. The eyelids ſwelled and became hard, as if interſperſed with millet ſeeds. The chief ſymptom (according to Ebn Roſchd) was a rotundity of the eyes, a ſtern fixed look, a conſtant epiphora, and frequently an inverſion of the eyelids themſelves. The noſe was affected with ulcerations, and turned outward; the lips ſwelled, grew livid and black, and were deformed with fiſſures, tumours, and condylomata: the breath became extremely offenſive: the whole body was covered with filthy blotches. (What our author, from the Latin verſion of Ebn Sina, calls *additio glandulosa*, p. 149, is in the Arabic text no other than *ſaphath*, which the tranſlators improperly derived from the Hebrew, ספח, *addidit.*) Glandular and ſcirrhous ſwellings ſupervene, with general leanneſs, and particularly a prominence of the ſhoulders, which Hippocrates calls πτερυγώδεα. A diſtortion of the limbs, particularly of the fingers, deſerves to be noticed; and laſtly death, from a complete ceſſation of all the ſenſes and functions.

The *lepra nodoſa* is much more accurately deſcribed by the weſtern phyſicians, and appears to be depicted with more lively colours by them, than by the antient Greeks and Arabians. This is the elephantiaſis, which, red at the commencement, paſſes on to the greateſt inſenſibility and ſtupor of all the parts, with

with hard tumours and tubercles in all the limbs. This leprofy is called *quietior* by Ebn Sina, becaufe its eruption takes place later, and its progrefs is more flow. It had the fpecific name of *leonina*, if the body were covered more abundantly with ulcerations, if the rednefs at the beginning verged more toward yellow, if the blood were in a more diffolved ftate, and if its progrefs were more rapid.

The *lepra tyria* was obferved only in the weft: for the *tyria* of the eaftern Arabians (which has been fubftituted to the text by the tranflators) is nothing but the *ophiafis*, mentioned above. This leprofy was fuppofed to be of a phlegmatic nature. Our author efteems the defcription of Gilbertus Anglicanus as claffical. The precurfory fymptoms were palenefs of the face, a livid fwelling, morphea alba, and various blotches. A leucophlegmacy of the whole body with a fhining fcalinefs, and here and there glandular tubercles. The fkin peeling off many times in a year, like that of ferpents: the eyes moift and ftupid: the habit of body fqualid, weak, lax, ferous: the urine watery, with a greyifh fanies [*glaucofitas faniofa*] (Gordon). This lepra tyria our author confiders as the more mature ftage of *leuces*, or *baras album*, the ultimate progrefs of which is defcribed with little accuracy by the antients. Hence too it appears, why the *lepra tyria* does not occur by this name in the Greeks and Arabians; and why the *baras album* is not found in the weft, as this is comprifed in the *tyria* by the barbarous Latin writers.

Lepra alopecia, another variety which our author calls *rubra*, does not occur in the eaft. The falling off of the hair, whence it derives its name, does not conftitute the characteriftic mark of the difeafe. The face, inflamed with red ulcers, grows ftiff with fanies (Gaddefden): putridity prevails throughout the body: the urine is red and turbid: there are no fwellings. Our author juftly conceives, that perhaps fomething fcorbutic prevails in this; and he calls it the cradle of fcurvy.

The *lepra nodofa* appears chiefly to have affected only fome of the fmaller limbs: hence the *elephantia* of the feet and of the hands, different metaftafes of the fame difeafe, but which writers commonly refer to different heads. Hence Aph. vi, 34, it is juftly faid: ὁκοσοι φαλακροι, τουτεοισιν κιρσοι μεγαλοι ου γινονται. For varices in conjunction with elephantiafis of the feet appear to have conftituted the critical metaftafis of alopecia.

Our author adds obfervations hiftorical and pathological. 1. Of the oriental leprofy, of which Egypt feems to have been the native land. The difeafe of Job was certainly the *lepra pforica*, as prof. H. ably demonftrates. The leprofy of the Ifraelites was the *baras album*. 2. Of the leprofy of the Greeks and

and Romans. The *lepra alba* occurred here and there in the iſlands of the Archipelago: but the *nodoſa*, and more eſpecially the elephantiaſis of the extremities, were ſcarcely known to the Greeks a century or two before the Chriſtian era. (Plutarch. Sympoſ. viii, 9.) The leproſy of the Romans before the time of Cicero was the *impetigo*. Celſus confounded and jumbled together all the ſpecies and varieties of leproſy. After that time the *mentagra*, a direful leprous diſeaſe, broke out. Our author confeſſes, that he could not diſcover the *elephantia alba* in Pliny, which Raymond and even Geſner found there. (If we may give our opinion, it is, that Geſner concluded Pliny ſpoke of the *lepra alba* from the paſſage in his *Hiſt. Nat.* lib. xxviii, 12. For theſe *lentigines* and *lichenes*, which disfigure the ſkin with a white colour, are mentioned: theſe ſpots are reſtored to the natural colour by aſſes' ſuet, &c.)

Prof. H. ſhews, by powerful arguments, that the leproſy, ſtrictly ſpeaking, was not communicated to the countries of the weſt by means of the croiſades; but had remained in them from the oldeſt times of the Romans. But he does not deny, that the leprous lues raged with greater violence after the time of the holy wars, as is proved by the numerous *miſellaria*, or lazar-houſes, which Matthew Paris eſtimates at 19000. He ably depicts the ſtate of the wretched lepers, who were likewiſe called *miſelli*, lazars. It was the cuſtom, however, to pay a particular reſpect to the lazars, as if they were martyrs expiating family ſins. (We cannot here but remember the kind of religious reſpect paid to the *cretins*, as Ackermann teſtifies.) The lepers appear likewiſe to have been dead in law: nay, public interments were inſtituted. The abodes of lepers were called *ſtellæ* and *cucurbitæ*.

Our author next proceeds to the decline of the leproſy in the weſt. The ſymptoms of *lepra nodoſa* gradually vaniſhed: impetigines and cutaneous affections became more common toward the end of the 15th century. Thus at length the leprous conſtitution paſſed into the ſyphilitic. Thus lues venerea, ſtrumæ, and elephas (according to Ballonius) have ſomething of affinity, and συγγενες. He likewiſe quotes ſome more modern obſervations on ſporadic leproſy, and the progreſs of leproſy to America. In p. 243 he ſays, he does not know whether the leproſy be found in the interior parts of Africa. But Bruce informs us, Travels, book v, chap. 1, that the *lepra pſorica* is very common in Abyſſinia. The diſeaſe differs completely, as he affirms, from the Syrian leproſy; though it likewiſe commonly produces metaſtaſes to the feet. Bruce denies, that the diſeaſe is contagious. For the *lentigo leproſa* or *morphea* of Aleppo, ſee the Travels of Count de Ferriere-Sauvebœuf.

The pathological explanations, which our author adds, merit the higheſt praiſe. The obſervation of a ſpecies of *lepra tyria*, which came under his own inſpection, particularly deſerves notice. Of the eruptive fever: of the affections of the genitals, particularly priapiſm and ſatyriaſis: of nervous affections.

The extracts added contain, beſide paſſages from the Arabian and barbarous Latin writers, Peyſſonel on the Leproſy of Guadaloupe from the Philoſ. Tranſact. Deieanius's Epiſtle on the Leproſy of the Eaſt India Iſlands, Buechner on the Leproſy of Norway, called *ſpedalſkhed* by the Danes, *ſpetælſkat* by the Swedes, &c.

B. D.

Liverpool, March 5, 1803.

To Dr. BATTY.

DEAR SIR,

THERE is an omission in the description of the gorget, contained in the last number of the Journal, which I feel obliged to request you to supply. After speaking of the ill consequences of the cutting edge being of too small or of too great extent, it is added, (page 394, line 14) Three quarters of an inch is the distance to which I have directed that the cutting edge should extend, from the beak in the *transverse direction* in a gorget for operating on an adult subject. The words printed in italics, were interlined in my manuscript, and have not been inserted in the Journal. Perhaps this description is not sufficiently explicit; but I thought it would be intelligible to persons already acquainted with the general form and use of these instruments. It might have been said that the most projecting part of the cutting edge, should not extend further than three-quarters of an inch in the tranverse direction, from a line drawn length-wise along the middle of the instrument, from the beak to the handle. There was also a little diagram connected with the drawing that I sent you, which is omitted in the plate. It represented, by a dotted line, a portion of a circle drawn by putting one leg of a pair of compasses at the end of the cutting edge, next the beak, and opening them to the exact depth of the groove of the staff, and by describing with the other the circle, to a segment of which the beak should be ground so as exactly to correspond. In the plate, the most projecting part of the beak is not drawn to represent an exact segment

segment of a circle. It is difficult to describe an instrument so precisely and fully, as to leave no room for misconception, I have therefore preferred a general and concise description of the gorget, to one more minute and laboured, and which, after all, might still be liable to be misunderstood. I am, &c.

May 13, 1803. J. ABERNETHY.

Account of Mr. Seguin's Remedy *against* Intermitting Fevers.

Mr. Seguin, well known as a chemist, believes he has discovered a remedy in the animal *jelly,* against Intermitting Fevers. He was led to that discovery, as he affirms, in the following manner: His own children were afflicted with intermitting fever; he employed different sorts of bark without any effect, till using a certain sort of it, which cured the fever immediately. Being desirous to know the reason of that phenomenon, he submitted these different sorts of bark to a chemical analysis; by which means he discovered that the bark last employed, possesses, in a valuable degree, the power of precipitating *tanning,* a faculty not observed in the former. This fact led him to suppose, that the cause of intermitting fevers resides in the *tanning,* and that the bark cures that disease, in proportion as the disease contains *tanning.* In order to ascertain his opinion, he employed some other substances having the virtue of precipitating *tanning,* for the cure of intermitting fevers. He first tried *jelly,* and with such effect, that he saw no reason to proceed to farther experiments on other substances. He thus cured forty instances of intermitting fevers.

Having communicated his theory and his experiments to the National Institute of France, a committee was established to examine into the offered discovery. The Clinical School of Improvement (Ecole Clinique de perfectionement) at Paris, was chosen as the seat of experiments.—Some patients, affected with the above mentioned disease, were received there, and treated with jelly, and, with few exceptions, were all cured in a short time, either by the jelly or by the return of the spring season, but to which of these we will not decide. Whatever might be the result of these experiments, it still remains certain, that jelly is a very valuable *remedy* against hunger. F.

MONTHLY REPORTS.

Cases admitted under the Care of the Surgeon of the Finsbury Dispensary, St. John's Square, Clerkenwell, from April 10, *to May* 10, 1803.

Phlegmone	2	Gonorrhœa	2
Erysipelas	1	Scrophula	5
Abscessus Artuum	9	Hernia	1
Mastodynia	2	Steatoma	1
Herniæ Humoralis	2	Hæmorrhois	2
Ulcera Artuum	12	Hydarthus Ischii	1
Lippitudo	2	Incontinentia Urinæ	1
Fistula in Ano	1	Strictura	1
Fractura Claviculæ	3	Eruptiones	5
Vulnera	3	Vacciola	63
Contusiones	8		
Lues	3	Total	128

In the last Reports some cursory observations were made on the good effects of electricity on disease; I shall, however, hope to be excused for again introducing that subject, by the relation of some well-marked cases, in which that power has proved itself a preservative of the limbs and lives of the patients.

The cases which I now allude to were diseased knee joints.

D. R. a person of about 30 years of age, had had at different times the venereal disease in its constitutional form, for which he had taken much mercury, without any regularity, nor conducted by the advice of any professional person; some months since he applied to me, on account of a disease of the knee joint, which had commenced during the action of mercury, and at the time when he had venereal pains in the bones, and which he therefore attributed to the same cause. The knee was very much enlarged, perfectly rigid, and extremely painful; I was not of opinion that it was altogether a symptom of the venereal disease, but rather a rheumatic affection, to which disease he had been previously very much subject, and which predisposition had been very much augmented by exposure to all the variations of atmosphere during the action of mercury; but still however, other venereal symptoms existed, as enlargement of the tibia, and pain there, and ulcerated throat. I therefore administered mercury, so as to produce a gentle and moderate action, by small

quantities

quantities of hydrarg. muriat. internally, and used frictions of the ointment to the knee. In the course of a few weeks all the truly-marked venereal symptoms disappeared, but the knee became worse. Blisters were used, fomentations, poultices, and every variety of topical application, as likewise various internal means, but without success; indeed, with an aggravation of the disease; the knee being now enlarged to an astonishing size, and his health gradually decreasing from the constant excess of pain.—In this state I began to use electricity, by small shocks, passed in every direction through the joint, and repeated every day. From the first week, the progress of the disease stopped, and it soon began to decrease, till, at the end of two months, no vestige remained, except some slight thickening of the ligaments, which, however, produced little impediment to motion.

The other case was in a person, not a patient of mine, but whom I saw once during the worst period of the disease, and whose symptoms and their progress I can relate, from the testimony of two very respectable surgeons of this metropolis. The patient was a young woman of about 25, and the disease was a true scrophulous white swelling; it had existed for a long time. She had conformed to the advice of many eminent surgeons, without benefit; she became hectic, and amputation was advised as the only preservative of her life. She in this state applied to one of the above surgeons, in order to undergo the operation; but her health was so reduced, that he thought she could hardly support it, as she laboured under a profuse diarrhœa. During the administration of some medicines which were given to abate that symptom, he passed some gentle shocks through the knee; which being daily repeated, seemed to relieve her pain considerably; all applications were omitted, except a linseed poultice; her health amended, the knee gradually lessened, and in a few months became perfectly well, except some slight stiffness of the joint.

In the last Report I announced my intention of submiting some observations founded on experiment, of the action of Galvanism on the healthy and diseased state of the animal body, and compared with the effects of electricity.

The accurate knowledge of the action of that principle, will, I doubt not, add much to our powers in the healing art; but such knowledge cannot be gained but by a very

careful investigation and comparison of facts, and therefore some considerable time must elapse, before such observations can be in a state fit to be submitted to the public eye.

68, Hatton Street. J. RICARDS.

Account of Diseases in an Eastern District of London, from April 20, to May 20, 1803.

ACUTE DISEASES.	
Synocha Catarrhalis	10
Typhus	4
Scarlatina Anginosa	6
CHRONIC DISEASES.	
Dyspnœa	6
Tussis	10
Tussis & Dyspnœa	15
Hæmoptysis	4
Pleurodyne	3
Anasarca	3
Ophthalmia	2
Amenorrhœa	7
Chlorosis	5
Fluor Albus	4
Menorrhagia Difficilis	3
Dyspepsia	6
Hypochondriasis	2
Ecchymosis	1
Dysuria	2
Hæmorrhagia Intestinalis	2
Hæmorrhois	4
Hernia	1
Paralysis	3
Nephralgia	2
Sciatica	2
Rheumatismus Chronicus	25
PUERPERAL DISEASES.	
Peritonitis	3
Ephemera	4
Menorrhagia Lochialis	7
Mastodynia	8
INFANTILE DISEASES.	
Aphthæ	5
Ophthalmia	3
Anus Imperforatus	1
Herpes	5
Vermes	4

The number of patients labouring under the late epidemic disease has been gradually diminishing, and at present the subjects of it are but very few. In many instances, however, the period of convalescence has been much protracted; and during the debility which has prevailed in consequence of it, patients have been liable to the attack of some chronic disease, which has proved more obstinate and tedious than usual.

This remark applies more particularly to Chronic Rheumatism, numerous cases of which have occurred, that have resisted the usual means of cure.

CRITICAL

CRITICAL ANALYSIS
OF THE
RECENT PUBLICATIONS
ON THE
DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL PHILOSOPHY.

An Inquiry into some of the Effects of the Venereal Poison on the human Body, with an occasional Application of Physiology, Observations on some of the Opinions of Mr. John Hunter and Mr. B. Bell, and Practical Remarks; by R. Sawrey, Surgeon, pp. 201. 8vo.

Many important points concerning the theory of the Lues Venerea still remain undecided; nor are these of slight importance, since, in several essential particulars, the practice must be directed by them. The Author of this Treatise professes it to be his intention to examine into these disputed points, to criticise freely the opinions of some of the most eminent writers and practitioners, and to endeavour to explain some of the difficulties which lie in the way of these inquiries.

As the points in dispute have often been controverted, we shall confine ourselves to a simple abstract of the pages before us.

In the Preface, the Author thus claims the liberty of free Inquiry, a liberty which, in medical subjects, is seldom disputed.—"In the execution of this work, which I have found to be difficult, the subjects of which I hope the Reader will think with me to be of some importance, I have been under the painful necessity of differing in opinion from two modern and eminent authors. But in the practice of medicine, it is above all things necessary that there should be no *dictator*. This science, so essentially connected with the happiness of man, for a long time was under the bondage of names, and only began to rise to its present improvements when its students claimed and exerted the independence of free inquiry."

Whether we have quite emancipated ourselves from this bondage of names may perhaps be questioned by those who have not yet been able precisely to understand the import of such terms as "specific action," "taking on a new action," "excitability," &c.

In the first chapter, the Author discusses the important question, Whether the same poison produces gonorrhœa and chancre? In this, as all our readers must know, the opinions of Mr. Benjamin Bell and Mr. John Hunter are at variance; the former gentleman considering them as different specific contagions, the latter as the same contagion, acting in a different manner according to the

 part

part which it affects. First, with regard to Mr. Bell's opinion, the Author observes rightly enough, that "the proper way of considering this question is to examine the matter of fact, whether gonorrhœa ever contaminates the system and produces lues venerea; for that chancre produces this effect is disputed by none, and, therefore, if gonorrhœa should be found to act in the same manner on the general habit as chancre, the identity of the poison in each case would be decided.

The question has often been agitated, and cases have been given directly in point. The Author gives his. The first is the case of a female infected with gonorrhœa unattended with chancre, by a person who was suffering under the same complaint.—When she was cured of this symptom, a venereal eruption and sore throat appeared, which yielded to mercury. The female *asserted*, that she had no connection with any one but the person from whom she received the gonorrhœa. The second case is very similar to the former. A person infected with gonorrhœa gave a female, whom he supposed he alone had injured, both gonorrhœa and chancre. On this case the Author makes the following singular remark, "he had not the smallest idea but that if she was injured, he was the cause; being perfectly of opinion that she had no intercourse with any other man. I am aware that such presumptions as these are very apt to be fallacious. But, however, there are cases in which, from peculiarity of circumstances, *the belief and conviction of a man of sound judgment, who is desired to be wary and discriminating on the subject, must have very great weight.*"

A medical attendant cannot, certainly, disclose every particular relating to such cases; but as the author does not pretend that these females had any claim to credibility on account of *character*, we conceive that a wary and discriminating examiner will not be disposed to lay much stress on evidence like this.

The third and fourth cases are more to the purpose. In each, a gentleman affected apparently only with gonorrhœa, and treated by injections, was attacked with decided symptoms of lues whilst under cure, and without receiving any fresh infection.

The author also appeals to the profession, whether similar cases do not sometimes occur, though rarely. On a subject of this importance our readers will allow us, we hope, to give the evidence of a practitioner of great experience, and a writer of celebrity.

"Some English writers have maintained that the virus which produces gonorrhœa is not the same with that which causes chancre or lues. They hold the opinion that the acrid virus which occasions gonorrhœa is generally different from the proper syphilitic poison, and therefore that the idea of a syphilitic blennorrhagy, *(virulent gonorrhœa)* is entirely void of foundation.

To this I answer, that though it is uncommon to see a clap produce syphilis, yet it is not so rare but that several examples of it may be found, especially in great towns. I have seen it in several instances, without being being able to detect any appearance of chancre

chancre either in the thigh or on the genitals. These accidents happen principally after blennorrhagy with more violent symptoms than usual, and where a great extent of surface is affected. For this reason they are more frequent in women than in men. But of all the syphilitic blennorrhagies which I have ever seen accompanied with ulcers in the urethra, *every one of them was followed with symptoms of lues*, and of the most indisputable kind. The reason why blennorrhagy so seldom produces lues, is, that when the syphilitic virus is applied to the urethra, it excites only a superficial ulceration, and very rarely produces excoriation or ulcers, whence the poison may be absorbed into the mass of the blood. The mucous membrane of this canal is defended by a large quantity of mucus, the secretion of which is further increased by the local irritation, and hence too the virus is diluted, the sides of the urethra are defended from its action, and ulceration is prevented. But if this secretion is suddenly stopped, either by the violence of the irritation or by improper injections, in nine cases out of ten, ulceration of the urethra will follow, and this will as certainly be followed by lues as syphilitic ulcers will be in any other part of the body.

If there was as copious a secretion of mucus between the prepuce and the glans as in the urethra, ulcers would be as rare in the one as in the other. In the cases in which the syphilitic virus occupies the corona glandis, and produces an unusual discharge of mucus, no ulcers are observed, but only a considerable tumour, accompanied with a copious discharge of puriform mucus like that which occurs in common blennorrhagy. Hence this complaint has been termed the *blennorrhagia glandis*." (*Swediaur Traité sur les Maladies Syphilitiques*, 1798, *tom. i.*

To return to the work before us. In the second chapter the Author explains the differences between the effects of gonorrhœa and chancre, principally from the difference in the structure of the parts, and the ready disposition in the arteries of the urethra to throw off any noxious virus by abundant secretion into the urethra and its lacunæ.

In the third chapter, Mr. Bell's arguments for the dissimilar nature of gonorrhœa and chancre are examined. Much of the proof must of course depend on the degree of credit to be given to the supposed evidence of facts brought forward; in other cases the facts may be admitted, but explained in a different manner. Mr. Bell lays much stress on the circumstance, that in many cases of inflammation occasioned by the sudden stoppage of a clap, the patients were cured without the use of mercury, and without the appearance of any syphilitic symptoms. Where this sudden check to the gonorrhœal discharge happens, it has been supposed, Mr. B. argues, that this "must necessarily throw the matter into the blood, and that pox must accordingly ensue from it. Were the matter of the two diseases the same, (he adds) this would happen in every instance; so that, when we can show that it seldom happens even in

in appearance, we are entitled, from this argument alone, to conclude that they are produced from two different kinds of contagion." The author answers this objection of Mr. Bell, and, so far, successfully, by shewing that a sudden check of the gonorrhœal discharge does *not* necessarily throw the virus into the blood. The product of gonorrhœa, the author remarks, " is formed by a disease in the vessels of the urethra, and is deposited from their mouths into the urethra and its lacunæ, from which it finds easy egress out of the orifice of that canal. There is no particular *reservoir* where a certain quantity of the poison is laid up at the beginning of the disease, which quantity is either to be discharged or conveyed into the system before a cure can be accomplished or the disease be removed from its seat. Be the discharge stopped sooner or later, quickly or slowly, by the interference of nature or art, it is not a necessary consequence that the quantity of this matter, which might otherwise have been discharged, is thrown into the circulating fluid, for, as formed, it is deposited into the urethra and its lacunæ, and finds easy egress out of the urethra."

The author continues his remarks on the much disputed case of *translation* of gonorrhœal virus from one part of the body to the other, and particularly to the eye, a supposed case of which is given by Mr. Bell. The author's chief objection to this is, that he cannot conceive how such a translation should have happened through the medium of the circulation, on account of the very long, roundabout course which any quantity of virus must pursue from the urethra to the eye, the particulars of which circuitous course he traces through the lymphatic, pulmonary, and aortal systems with as much accuracy as the ready candidate while under examination for his diploma. Now, without undertaking to defend Mr. Bell's individual case, it is certain that, however difficult it may be to conceive how sudden metastases from one to a distant part of the body should be performed through the involved medium of the circulation, it is full as difficult to account for it by any other hypothesis. Even in the simple cases of peculiar aliments affecting the excretions of the body, the course of (for example) that part of asparagus, which, when taken into the stomach, gives a peculiar odour to the urine in a few hours, is sufficiently circuitous, nor is it easy to understand exactly how this change takes place.

The title of the next chapter is, Practical Admonitions upon the Cure of Clap. The only practical admonitions that occur are, to use small quantities of mercury with a view of preventing clap from contaminating the blood, and to employ such injections as " from experience are known most often to relieve, without injuring the part."

The author now proceeds to the *philosophy* of the venereal disease or the truly theoretical part of the question, a subject which involves an infinite number of the higher and more difficult questions in physiology, and can only be fully elucidated when these mysteries of the animal economy are unveiled to us. On this account, and because it

would

would be doing injustice to the subject to attempt an abstract of it in the limits that we must allow ourselves, we shall pass over the remainder of this volume, in which, though ingenuity and acuteness are exhibited, the author is much more successful in refuting errors than in explaining difficulties; and the several objections against Mr. Hunter's opinions, which he brings forward, have been often urged and never repelled in a satisfactory manner.

Attempt to investigate the Cause of the Egyptian Ophthalmia, with Observations on its Nature and different Modes of Cure; by GEORGE POWER, *Assistant Surgeon to the Twenty-third Regiment of Foot, or Royal Welch Fusileers.* pp. 72. 8vo.

THE author speaks of this dreadful disease as an eye witness, having been attached to the medical staff of the army that served during the campaign in Egypt in the year 1801, and having had under his care several hundred patients afflicted with a variety of complaints incidental to the climate, as he informs us in the introduction to this treatise. Many opinions and conjectures have been formed as to the nature of the Egyptian ophthalmia; it has been described in some of the later French publications, and one or two pamphlets have been published in England on the subject, no single one of which, however, can be considered as sufficiently full and accurate.

The cause of this disease has been variously given by different writers; some have attributed it to the mechanical effect of the burning sands of the desert blown against the eye, already strained by the vivid reflection of light and heat from the ground; others, to a nitrous or saline quality in the air; others, to sudden alternations of heat and cold, or rather to the excessive chill dews in the evening succeeding to the parched burning atmosphere of the day; and some have distinguished varieties of the disease, as produced in one case by a combination of all the above circumstances of local irritation, with those of general debility; and in another case, as evidently symptomatic of excessive bilious acrimony in the primæ viæ. This last opinion is advanced with great force in a small but excellent paper on this subject, published by Cit. Bruant, and inserted in *Desgenettes Histoire Médicale de l'Armée de l'Orient.*

Mr. Power begins by noticing several of the supposed causes of this Ophthalmia, many of which he entirely rejects.

The sands he thinks by no means an adequate cause of the complaint, for the following very cogent reasons: First, because the Bedouin Arabs are exempt from it, and even the Europeans of general Baird's army, on marching across the Isthmus of Suez, did not suffer from it; secondly, because the disease was chiefly contracted in the night, when the heavy dews prevented the dust from floating; and, thirdly, because the disease has occurred in places where neither of these causes could have operated.

It has long been remarked that the cultivators of rice in Egypt were particularly subject to blindness; but here too, as has often been observed, the exhalations from the inundated fields in which this

this grain is cultivated, are much more likely to produce the disease than any fancied qualities of the grain itself.

The author then gives his own hypothesis. "As the immense quantities of animal and vegetable substances which abound in Egypt," he observes, "when acted on by great heat and moisture, cannot fail to pass into putrefactive fermentation, putrid effluvia must there assume the highest degree of malignity, the deleterious effects of which are obvious. . . . . It fortunately, however, happens for the inhabitants of Egypt, that these effluvia become susceptible of new changes while buoyant in the atmosphere by spontaneous decomposition, whereby their component parts becoming disengaged, are either reduced to their first principles, or by taking a new arrangement, form compounds by combination with other substances in the atmosphere. Thus the earthy and saline substances that abound in the Egyptian atmosphere are produced, whilst the swarms of insects that are propagated, probably tend to correct the putrescence of the air by a passive as well as an active agency, which it is not necessary here to insist upon."[4]

For the sake of his chemical readers, it would have been desirable however if the author had insisted somewhat upon the active and passive agency of swarms of insects in correcting the putrescence of the air, as it is an hypothesis as curious as novel. Still however we do not come to the point, why Egypt should be peculiarly infested with ophthalmia, for the above remarks apply equally well to Surinam or Batavia. The author continues. "The ammoniacal and fixed alkaline salts, either in a nascent state or combined with different acids whilst floating in the wind or deposited with the dews, may tend to occasion an ulceration of the fauces, together with the peeling of the skin from the face and hands, and from their pungency must be peculiarly destructive to the eyes."

What the *nascent state of a fixed alkali* is, we yet have to learn; and even with regard to a supposed *saline* state of the Egyptian atmosphere, before we admit the fact, we must enquire what are the experiments on which this assertion is advanced? For, in the present state of chemical science, we look for something more than the old hypotheses concerning the *nitre of the atmosphere*.

"The argillaceous and calcareous earths, which abound in the atmosphere either in a separate state or combined with sulphuric or carbonic acid, and which were supposed by the French surgeons to be peculiarly destructive to the eyes, may also be *thus* accounted for."—How accounted for? Are these earths also in a *nascent state*, and generated by the mass of vegetable and animal putrefying matter?

But we suppose he means, that when certain winds, or perhaps any violent winds prevail, part of the dry materials of the soil are converted into dust, and this dust of course may consist of sand, of nitre, if the soil contains this salt, and of any other casual ingredient: it is of some importance, however, to distinguish between clouds of dust, and the regular constitution of the atmosphere in

which

which that dust is floating. With regard to the peculiarly injurious effect of the calcareous and argillaceous part of Egyptian dust, we must do the author the justice to say, that it is an opinion of Cit. Savaresi, and is supported by this writer on the following very singular proof: " L'expérience* prouve que ces deux substances & leurs bases occasionnent sûrement l'ophtalmie. En effet je les ai introduites apres les avoir pulvérisées, dans les yeux de divers chiens, qui devinrent presque aveugles le lendemain de l'opération. . . . . . J'ai vu deux grenadiers se jetter, en plaisantant, de la chaux qui porta sur leur visage & entra dans leurs yeux; ils eurent une ophtalmie qui les obligea de venir à l'hôpital.—Experiment shews that these two substances, (clay and chalk) as well as their bases, will infallibly produce ophthalmia. I have actually introduced them, previously rubbed to powder, into the eyes of several dogs who became almost blind the day after the operation. . . . . . I have seen two grenadiers throw lime at each other, in jest, part of which struck the face and entered the eyes: the consequence was an ophthalmia, which obliged them to come to the hospital." With due respect to Cit. Savaresi, it hardly seems a very fair experiment to almost blind a number of poor dogs by stuffing chalk or clay into their eyes, and to infer from it that the particles of these earths, floating in the air, will have the same effect; and unless he can prove that *quick lime* is also floating in this heterogeneous Egyptian atmosphere, the innocent amusement of these two grenadiers will prove nothing more than what every common bricklayer's labourer has often experienced to his cost, namely, that it is bad for the eyes to get lime into them.

The next section of the pamphlet before us deserves attention. The author is still aware that all the predisposing or exciting causes of ophthalmia which he has enumerated, do not apply very exclusively to Egypt, and the question to be determined (for the fact is undoubted) is, the reason why the Egyptians are peculiarly obnoxious to this disease?

The answer to this he finds, partly in the corporeal and mental debility induced by the heat of the climate, partly by the abuse of the tepid and cold bath, excessive venery, opium, tobacco, and poor diet: But the following appear the causes peculiarly Egyptian: " The extensive steril plain that is constantly presented to the eye, bounded only by the horizon: its glowing surface strongly reflecting the rays of the sun, which torture the eye by impressing too great a quantity of light on the retina; at the same time that the acting organ finding nothing to relieve the view, or to afford an idea of distance, becomes unavoidably excited beyond its proper sphere of action." This is highly probable and sufficiently a local cause. The last clause, however, though ingenious, may perhaps be doubted; that is, whether it has a tendency to debilitate the eyes, to be in

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* Memoires sur l'Egypte, Seconde Partie, p. 347.

in the habit of directing the sight to very distant objects. We remember that Vaillant asserts, that from being naturally short and weak sighted, he acquired length of sight and strong power of vision by travelling in the boundless and sultry plains of Caffraria; and certainly the strength of a seaman's eye is proverbial.

The next local cause of ophthalmia in Egypt is, "the custom of sleeping at night in the open air, imbibing with every inspiration, and absorbing at every pore, the putrid virus contained in the descending dews. What the peculiar nature of this putrid virus may be, I shall not take upon me positively to decide. But when the similarity of circumstances in which the various diseases of Egypt are found to arise, as well as the different and even opposite circumstances in which they show themselves are considered, it will appear highly probable that a putrid virus is the chief efficient and common cause of disease. . . . ."

"Thus, in a system peculiarly debilitated, and unable to resist all its powers combined, it produces that highly putrid fever called PLAGUE. In a patient less relaxed, as the habit of body determines the disease either to the surface of the skin or to the intestines, an ERUPTIVE FEVER or DYSENTERY is produced; and when the putrid virus is but partially applied, to the eyes for instance, or to the mouth, or even on the surface of the body, OPHTHALMIA, ulcerated fauces, or ichorous blotches on the skin ensue."

The Author here opens a very interesting field for speculation, by this opinion on the common origin of the Plague, Dysentery, and Ophthalmia. The idea is ingenious at least, and merits attention. Ought it not to happen, however, on this hypothesis, that the symptoms of these three diseases should be mutually convertible, according to the force of the exciting cause? and should not ophthalmia be as common a symptom of plague as bubo or carbuncle?

In the next section the Author gives the evidences of the contagious nature of the Ophthalmia. They are very few in number, but very forcible. The fact of its occurring at Gibraltar, mentioned in Mr. Edmonstone's pamphlet, (which we noticed in a former Number) is very striking in support of the opinion that this disease is contagious.

The symptoms are then described. The Author thinks that the disease may be divided into the acute and chronic, with several inferior varieties. The attack begins with a slight itching in the eye, to which succeeds increased secretion of tears, followed by a dimness of sight, owing to the deposition of a mucilaginous matter on the cornea. Often the disease proceeds no further if due attention is paid to the patient, if his constitution is good, and he can be indulged with rest, and can avoid the light. If, however, the complaint continues, the secretion from the surface of the eye acquires great acrimony and produces excessive pain; then follows inflammation of the conjunctiva with protrusion of the eye-ball, which renders it very difficult to close the eye-lids, whilst the impression

impression of light becomes excessively painful. If the disorder is not checked, the whole forehead suffers most acute pain, increased at every pulsation of the carotids, and the patient feels apprehensive that the very sutures of his skull will separate.

Tumours are formed in the parotid glands, which sometimes degenerate into foul abscesses, and every symptom appears of high inflammatory fever. At last suppuration within the ball of the eye follows, the whole of this organ becomes an abscess, the cornea bursts, and the eye is destroyed for ever; or else the purulent matter being confined, affects the general health; diarrhœa or dysentery supervene, and the case terminates at last fatally in the highest state of hectic debility.

A very troublesome and distressing symptom, even in the favourable cases, generally occurs; it is a very large œdematous swelling of the eye-lids, enlarging them so much as to obstruct vision very materially. Specks and opake knots on the cornea also are frequent on the subsiding of the inflammation.

The Egyptian doctors use a variety of remedies for this complaint, many of them whimsical and superstitious. They are very fond of scarifying the eye-lids, which, as it is used indiscriminately, appears to produce nearly as much harm as good. Much advantage is derived by a cold poultice of the leaves of the kali plant simply beat up with a little cold water.

The plan of cure adopted in the British hospitals was generally the antiphlogistic, both general and topical, but varied according to circumstances. In short, it appears that the treatment was much the same as it would have been in any other case of ophthalmia, some regard being had to the situation of men exposed to fatigue, and other debilitating causes. Blisters applied for a few hours as rubefacients, the author speaks of in high terms of commendation, especially in that state of great local debility and spasmodic contractions of the eye-lids and adjacent muscles, which was often left in delicate habits long after the inflammatory symptoms had been removed.

Even when the globe of the eye contained an evident quantity of pus and the cornea seemed ready to burst with the tension, if the patient could be placed in circumstances favourable to health, and his constitution was good, he sometimes recovered by the use of topical discutients, and even the sight was completely restored.

The Author then mentions a remedy which he was induced to use in his own case, having had too much reason to lament the frequent failure of the other plans of treatment. It is the use of opium internally, which seems by his account to have produced the most signal advantage. Having prevailed upon Mr. Davis (of the 26th Dragoons) to use this remedy himself, which was followed with a speedy cure, the author adds: "It is needless to say how eager we felt to communicate to our patients the advantages we had derived from this excellent medicine. The opium was administered according to the plan of cure hereafter laid down," (a quarter of a grain

grain every four or six hours) ;" and it is a fact no less surprizing than true, that in the space of a month from the adoption of this remedy we were enabled to restore to the army almost every ophthalmic patient in a state of convalescence, or of perfect health."

The Author laments in the Introduction to this interesting little work the loss of his port-folio, which contained all his cases, and we think that his readers have equal cause of regret.

As the Author has more than once mentioned Cit. Bruant's paper, we shall extract what this physician says concerning the plan of cure, as most of our readers may not have an opportunity of seeing the original.

" This disease is frequently cured by the simple operation of Nature, and without any assistance from art; and indeed we may affirm with truth, that nothing so much opposes the cure as too great a profusion of remedies, especially topical. Some patients have been relieved by an eruption coming on at the temples; others, and the greater number, by a slight diarrhœa; and hence, to act conformably to the views of Nature, I have encouraged a discharge from the bowels during the whole duration of the disease, by employing tamarinds or other laxative tisanes.

The treatment has been varied, according to the different species of ophthalmia before described. When the affection is local, and the inflammation is the leading symptom, we employ cold lotions and revulsives of every kind. With this view great advantage should be derived from general bleeding, but the decided bilious temperament of our patients has prevented us from using this remedy, and besides it is strongly counter-indicated in soldiers weakened by the hardships of a protracted war.

" We have not been able to use local bleedings hitherto," *(it does not appear why)* " though they might be safer and not less advantageous than the other; at least we have the example of the inhabitants of the country, who use it with success in the outer angle of the eye. . . . . We have hitherto contented ourselves with removing from the eye every irritating cause, and above all, light. When the pain is severe we apply some emollient remedy, but sparingly, because the relaxation which it produces makes the tumefaction very obstinate, and much retards the cure. Besides, a blister to the nape of the neck is of more service in this case, especially when the pain is not confined to the eye, but affects the whole head. When the inflammation abates, we begin to use resolvent collyria, the strength of which we gradually increase, and with which we compleat the cure.

" When it is discovered that the ophthalmia depends on foulness of stomach, evacuants must be had recourse to. . . . . . In the third species of ophthalmia which I have described," (where the inflammation is very slight, and there is no swelling, but the complaint consists of several nervous symptoms, spasm of the eye-lid, of the globe of the eye, and excessive susceptibility to light) " besides using tonics internally, I employ external antispasmodics, none

none of which answer so well as blisters; whereas, in the purely inflammatory ophthalmia, their use is very indirect. They are best applied behind the ears, and this also is the place selected by the Egyptians for the cautery, when they use fire in inveterate disorders of the eyes." *Histoire Médicale del Armée de l'Orient, par Desgenettes.*

MEDICAL AND PHYSICAL INTELLIGENCE.

[FOREIGN AND DOMESTIC.]

A successful Method of treating the Yellow Fever at its Commencement; communicated, May 25, 1803, by DR. HARNESS, *Commissioner for Sick and Wounded Seamen.*

LIEUT. DOUGLAS, of the 85th regiment, relates, that he embarked on board the Chichester store-ship at Jamaica for England with one hundred and eighty men, seventy-four of whom died on the passage previous to reaching Hallifax in North America, exclusive of the Captain, two Lieutenants, Surgeon, and Surgeon's Mate of the Ship. In consequence of the two latter having fallen victims to the disease, Lieut. Douglas felt himself driven to the necessity of undertaking the treatment of the sick; and from the great fatality attendant on the calomel and purgative plan, pursued by the late Surgeon and his Mate, he (Lieut. D.) was induced to adopt Bleeding, (as recommended by Dr. Jackson, and as had been suggested in Lieut. D's presence by the Surgeon's Mate of the 60th regiment, a short time previous to Lieutenant D. leaving Jamaica) which proved to have been productive of the happiest effects, as will evidently appear by the following statement.

Lieut. D. relates, that after the care of the sick had devolved upon him, sixty-two men (37 of whom were seamen) were attacked with symptoms of yellow fever, the whole of whom recovered by bleeding; three others were likewise bled, but he observes, so late in the disease, or not until the symptoms of fever were so fully established, as not to be within reach of the remedy.

Lieut. D. remarks, the success in treating the disease was so evident to the troops and ship's company, that after a short time they would, on being taken ill, apply to be bled; and Lieut. D. became so confident of its good effects, if had recourse to at the onset of the disease, as to induce him to give particular directions to be called any hour of the night to perform the operation, should any one be seized with the leading symptoms of the disease; and in every

every case (the three alluded to excepted) he had the happiness to see every symptom give way or diminished, and all unfavourable appearances removed by one, two, or three repeated bleedings performed at intervals of a few hours, as the necessity of the remaining symptoms indicated.

Lieut. D. not being educated to the profession, and consequently ignorant of the doses of medicines, was induced to have recourse to clysters, when the procuring of evacuations appeared necessary; on which, with bleedings as before mentioned, he rested the whole means of cure.*

Among the new Memoirs of the Academy of Sciences of Stockholm, (1801) the Essay of M. Acharius, *on the Use and Advantages of Tar-Water in Venereal Complaints*, is chiefly remarkable. The author insists that this water is often sufficient to operate a cure, and that there is no necessity to strengthen its operation by mercury, the fatal consequences of which are so well known; and that even if its efficacy were not sufficient, it is, at least, always an excellent preparative, calculated to facilitate wonderfully the effects of the mercury, and to diminish the doses of it. M. Acharius prepares his liquor cold; by this means the tar loses less of its acid; and as it is to serve for drink, he mixes it with common water, in the proportion of forty-five parts of water to two of tar. In the compressions or bandages applied to ulcers, &c. one part of tar should be dissolved in fifteen parts of water; the *balnea* or lotions administered two or three times a week have greatly contributed to accelerate the cure. Many patients have been compleatly cured by the external and internal use of this water alone, while others have found its salutary effects when combined with mercury or other remedies. Out of seventy patients, only eighteen were obliged to have recourse to the use of mercury with tar-water. The above-cited Essay enumerates the cases of a number of patients cured at the hospital of Stockholm, by the use of this specific only.

A letter from Dr. C. Caldwell of Philadelphia, to Dr. Patterson, in Londonderry, contains the following observations:

"On the score of science I have nothing particularly interesting to communicate to you. I think, however, our Philosophical Society

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* Our admiration of the uncommon merit of this officer, naturally led us to enquire whether his conduct had been properly represented to those who have the power to reward it, and we were assured that it had. We also learned, that apprehending the duties of captain and master of the ship might possibly devolve on him, as well as those of the surgeon and mate, he devoted himself to the study of navigation, and in a short time made such a progress in the practical part of it, as would have enabled him to conduct the ship home with safety. We hope this note will induce his friends to gratify us with more particular information respecting him, and his future promotion. Ed.

ciety is becoming more than usually ardent and active in pursuit of the objects and ends of its institution. Dr. Woodhouse is going on with a series of experiments on the oxyd, and other preparations of carbon, which promise to throw light on Chemistry, and perhaps to give to the Lavoisierian doctrine a more stunning, not to say fatal blow, than it has ever before received. His Memoir, when compleated, will probably be sent for publication to some of the European periodical works. Dr. Barton has in the press two works of some magnitude, viz. "The Elements of Botany," and "Fragments of the Natural History of Pennsylvania," Part, or rather No. II. I am myself, (Dr. C. Caldwell) engaged in several minor points of inquiry. One of the most interesting of them is the vitality of the blood. From my experiments, hitherto made, on this subject, I am disposed to consider, with the learned leader of Israel, and say, that "the life is in the blood." But I have not yet conducted my experiments to a close, and must not therefore pronounce decisively."

Cit. Thenard proposes the following method of purifying rape-seed oil: Mix to one hundred parts of oil, two parts of concentrated sulphuric acid, and shake them well; after which the oil will immediately change its colour, and become dark green; and when it has been suffered to stand for about one hour, flakes begin to be deposited. Add now, by degrees, double its weight of water, for the purpose of properly diluting the sulphuric acid. The mixture having been stirred for half an hour is suffered to stand quietly during eight days, after which the oil will be found to swim on the water, which stands over a blackish matter, precipitated from the oil by means of the sulphuric acid, and it is this matter which prevents its burning properly, and to which the general colour of that oil is owing. Three strata therefore may be distinguished in this mixture; the first, that of oil; the second, of water mixed with a little sulphuric acid; and the third, of coal. If the oil is intended to be quite transparent, it ought to stand for a longer time than eight days; but this may be shortened by letting it pass through a filtrum of woollen cloth, by which means it is rendered perfectly clear. By this proceeding, when properly and carefully employed, an oil is obtained, which is very little tinged, without any smell, and quite tasteless, and which burns extremely well. The loss during the whole process is inconsiderable. This process may be pushed still farther, by mixing one hundred parts of the above purified oil with one part of concentrated sulphuric acid, which occasions a grey precipitate that is with difficulty separated from the oil; but on its being digested with 0,02 of sulphuric acid and with one-fourth of its weight of lime, or argilla, the oil is obtained as white as clear water. The loss of oil, however, is very considerable; the argilla is more advantageous than the lime, as it may be afterwards expressed.

A Cor-

A Correspondent in Paris has lately informed us, that Mr. Vauquelin has discovered phosphat of lime in several kinds of corn, which proves the analogy of the chemical processes in the animal body with those in the vegetable organization, as such a combination had been as yet only found in the bones of animals.

Another new metal has been discovered, which is called *palladium*, or new silver. It possesses the following properties. 1. It dissolves in pure spirit of nitre, and makes a dark red solution. 2. Green vitriol throws it down in a state of regulus from this solution, as it always does gold from *aqua-regia*. 3. If the solution be evaporated, a red calx is obtained, that dissolves in spirit of salt or other acids. 4. It is thrown down by quick-silver, and by all the metals, except gold, platina, and silver. 5. Its specific gravity, by hammering, was only 11.3; but by flatting, it is as much as 11.8. 6. In a common fire it tarnishes a little and turns blue, but comes bright again, like the other noble metals, when strongly heated. 7. The greatest heat of a blacksmith's fire would hardly melt it. 8. But if it be touched while hot with a small bit of sulphur, it runs as easily as zinc.

Dr. Bouttatz, Russian physician, lately in London, has been commissioned by the Emperor of Russia to travel through that empire for the purpose of extending the Vaccine Inoculation.

Dr. Batty will commence his Summer Course of Lectures on the Theory and Practice of Midwifery, and the Diseases of Women and Children, on June the 20th, at nine o'clock in the morning, at his house in Great Marlborough Street.

To CORRESPONDENTS.

We have no other motive for postponing Dr. Hume's case, but the conviction that its publication at present could answer no useful purpose.

Communications are received from Dr. Mossman, Mess. Giraud, Hickin, Simmons, Robertson, N. G. Iatrice, Tinicola, and X.

We wish to remind our Correspondents that anonymous cases are not considererd by the public as medical evidence.

END OF VOL. IX.

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